

10/790, 746

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	165	vitamin adj D same (conjugate or tracer or label)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 14:24
L2	7	L1 and magnetic adj particle\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 14:26
L3	16	vitamin adj D near1 (conjugate or tracer or label)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 14:25
L4	3	L3 and microparticle\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 14:25
S1	2	("6787660").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2007/03/29 09:30
S2	5	immunoassay\$1 same vitamin adj D same (conjugate or tracer or label)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 09:56
S3	165	vitamin adj D same (conjugate or tracer or label)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 09:52
S4	16	vitamin adj D near1 (conjugate or tracer or label)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 14:25

EAST Search History

S5	3227	"I5" and kit	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 09:56
S6	8794	"I1" and kit	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 09:56
S7	4	S2 and kit	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/03/29 14:24

10/790,746

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STRUCTURE FILE UPDATES: 28 MAR 2007 HIGHEST RN 928615-67-2
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⇒

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chain nodes :

10 11 18 20 21 22 23 24 25 26 29 30 31 32 33 34 35 36 37

ring nodes :

1 2 3 4 5 6 7 8 9 12 13 14 15 16 17

chain bonds :

1-10 8-21 9-29 10-11 11-15 13-22 16-18 17-20 22-23 23-24 24-25 25-26
29-30 29-36 30-31 31-32 32-33 33-34 33-35 33-37

ring bonds :

1-2 1-7 2-3 3-4 4-8 5-6 5-9 6-7 7-8 8-9 12-13 12-17 13-14 14-15 15-16
16-17

exact/norm bonds :

13-22 17-20 22-23 25-26 30-31 33-37

exact bonds :

1-2 1-7 1-10 2-3 3-4 4-8 5-6 5-9 6-7 7-8 8-9 8-21 9-29 10-11 11-15
12-13 12-17 13-14 14-15 15-16 16-17 16-18 23-24 24-25 29-30 29-36 31-32
32-33 33-34 33-35

isolated ring systems :

containing 1 : 12 :

G1:H,OH

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:CLASS 20:CLASS
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 29:CLASS 30:CLASS
31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS 36:CLASS 37:CLASS

L1 STRUCTURE UPLOADED

=> d 11
L1 HAS NO ANSWERS
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 11
SAMPLE SEARCH INITIATED 09:23:26 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 6 TO ITERATE

100.0% PROCESSED 6 ITERATIONS 5 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 6 TO 266
PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

=> s 11 sss full
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FULL SCREEN SEARCH COMPLETED - 38 TO ITERATE

100.0% PROCESSED 38 ITERATIONS 31 ANSWERS
SEARCH TIME: 00.00.01

L3 31 SEA SSS FUL L1

=> FIL CAPLUS
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 172.10 172.31

FILE 'CAPLUS' ENTERED AT 09:23:39 ON 29 MAR 2007
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FILE COVERS 1907 - 29 Mar 2007 VOL 146 ISS 14
FILE LAST UPDATED: 28 Mar 2007 (20070328/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
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<http://www.cas.org/infopolicy.html>

=> s 13
L4 15 L3

=> s 14 and (biotin or digoxigenin or tyrosine or FITC or protein A or protein G)
31415 BIOTIN
119 BIOTINS
31426 BIOTIN
(BIOTIN OR BIOTINS)
4662 DIGOXIGENIN
7 DIGOXIGENINS
4664 DIGOXIGENIN
(DIGOXIGENIN OR DIGOXIGENINS)
158320 TYROSINE
2648 TYROSINES
158855 TYROSINE
(TYROSINE OR TYROSINES)
8821 FITC
2 FITCS
8821 FITC
(FITC OR FITCS)
1987847 PROTEIN
1389400 PROTEINS
2313180 PROTEIN
(PROTEIN OR PROTEINS)
20768876 A
27754 PROTEIN A
(PROTEIN(W)A)
1987847 PROTEIN
1389400 PROTEINS
2313180 PROTEIN
(PROTEIN OR PROTEINS)
2952226 G
11069 PROTEIN G
(PROTEIN(W)G)
L5 3 L4 AND (BIOTIN OR DIGOXIGENIN OR TYROSINE OR FITC OR PROTEIN A
OR PROTEIN G)

=> d 15 ibib abs hitstr tot

L5 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:59909 CAPLUS
DOCUMENT NUMBER: 142:134790
TITLE: Functional vitamin D derivatives and a method for
determining 25-hydroxy- and 1 α ,25-dihydroxy-
vitamin D
INVENTOR(S): Armbruster, Franz Paul; Voelter, Wolfgang; Tampe,
Jens; Birkmayer, Christian
PATENT ASSIGNEE(S): Germany
SOURCE: U.S. Pat. Appl. Publ., 31 pp., Cont.-in-part of U.S.
Ser. No. 720,338.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005014211	A1	20050120	US 2004-790746	20040303
DE 19840435	A1	19991230	DE 1998-19840435	19980904
WO 9967211	A1	19991229	WO 1999-EP4418	19990625

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,
IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG,
MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,
TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM

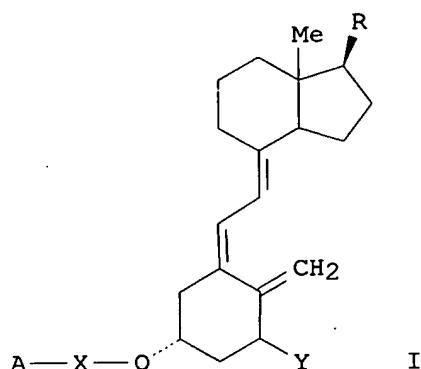
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ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6787660 B1 20040907 US 2001-720338 20010220

PRIORITY APPLN. INFO.: DE 1998-19828379 A 19980625
DE 1998-19840435 A 19980904
WO 1999-EP4418 W 19990625
US 2001-720338 A2 20010220

OTHER SOURCE(S): CASREACT 142:134790; MARPAT 142:134790

GI



AB The invention relates to multifunctional vitamin D derivs. I [O = oxygen atom of an ether group; X = spacer group having a length of 0.8 to 4.2 nm, for example, an amino carboxylic acid radical, an amino undecanoic acid radical, or an amino polyether radical; Y = H, OH; A = tracer group such as biotin, digoxigenin or another vitamin D group which are bound by a protein having a higher affinity; R = hydrocarbon side-group of vitamin D or vitamin D metabolites]. The invention also relates to a method for quant. determining a 25-hydroxy-vitamin D metabolite and a $1\alpha,25$ -dihydroxy-vitamin D metabolite in a sample.

IT 193278-61-4P

RL: ANT (Analyte); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)

(preparation of functional vitamin D derivs. and a method for determining 25-hydroxy-vitamin D and $\alpha,25$ -dihydroxy-vitamin D metabolites)

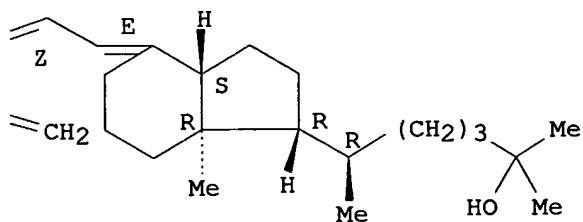
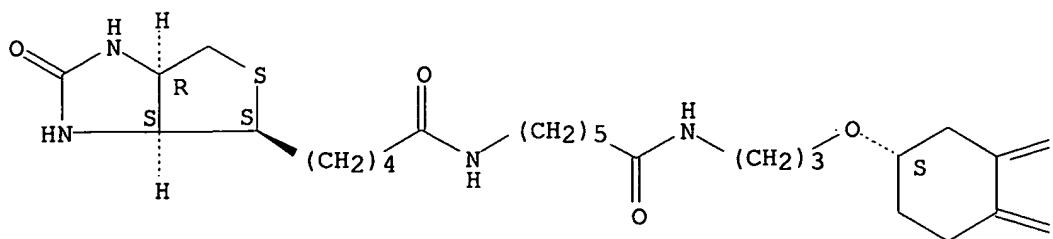
RN 193278-61-4 CAPLUS

CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[6-[(3-

[(3 β ,5 ζ ,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl]oxy]propyl]amino]-6-oxohexyl]-2-oxo-, (3aS,4S,6aR)- (9CI)
NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



IT 163018-26-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

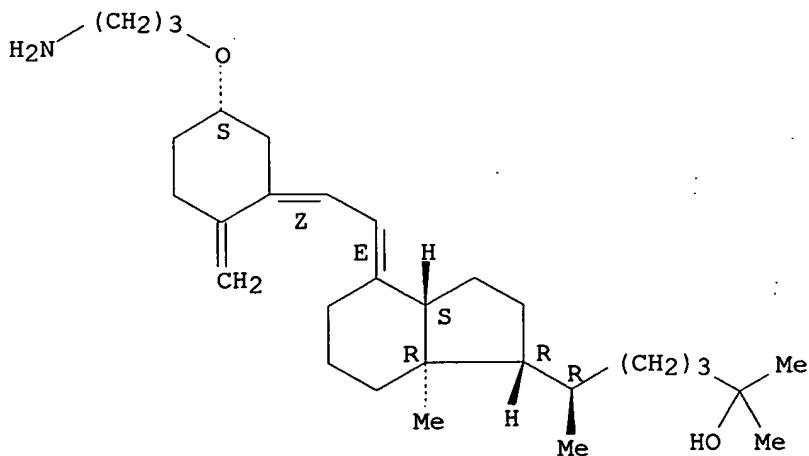
(preparation of functional vitamin D derivs. and a method for determining 25-hydroxy-vitamin D and 1 α ,25-dihydroxy-vitamin D metabolites)

RN 163018-26-6 CAPLUS

CN 9,10-Secocista-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-, (3 β ,5 ζ ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

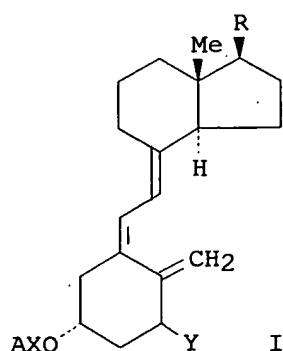
Double bond geometry as shown.



TITLE: Preparation of functional vitamin D derivatives and a method for determining 25-hydroxy-vitamin D and 1 α ,25-dihydroxy-vitamin D metabolites
 INVENTOR(S): Armbruster, Franz Paul; Voelter, Wolfgang; Schwing, Jens; Birkmayer, Christian
 PATENT ASSIGNEE(S): Immundiagnostik Gesellschaft fuer Produktion und Vertrieb von Labordiagnosti, Germany; Biomedica G.m.b.H.
 SOURCE: PCT Int. Appl., 47 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9967211	A1	19991229	WO 1999-EP4418	19990625
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19840435	A1	19991230	DE 1998-19840435	19980904
AU 9949011	A	20000110	AU 1999-49011	19990625
AU 763458	B2	20030724		
EP 1097132	A1	20010509	EP 1999-932730	19990625
EP 1097132	B1	20031217		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002518474	T	20020625	JP 2000-555865	19990625
AT 256658	T	20040115	AT 1999-932730	19990625
US 6787660	B1	20040907	US 2001-720338	20010220
US 2005014211	A1	20050120	US 2004-790746	20040303
PRIORITY APPLN. INFO.:			DE 1998-19828379	A 19980625
			DE 1998-19840435	A 19980904
			WO 1999-EP4418	W 19990625
			US 2001-720338	A2 20010220

OTHER SOURCE(S): MARPAT 132:50161
 GI



AB The invention relates to multifunctional vitamin D derivs. I [O = oxygen atom of an ether group; X = spacer group having a length of 0.8 to 4.2 nm,

for example, an amino carboxylic acid radical, an amino undecanoic acid radical, or an amino polyether radical; Y = H, OH; A = tracer group such as biotin, digoxigenin or another vitamin D group which are bound by a protein having a higher affinity; R = hydrocarbon side-group of vitamin D or vitamin D metabolites]. The invention also relates to a method for quant. determining a 25-hydroxy-vitamin D metabolite and a $1\alpha,25$ -dihydroxy-vitamin D metabolite in a sample.

IT 193278-61-4P

RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (preparation of functional vitamin D derivs. and a method for determining 25-hydroxy-vitamin D and $1\alpha,25$ -dihydroxy-vitamin D metabolites)

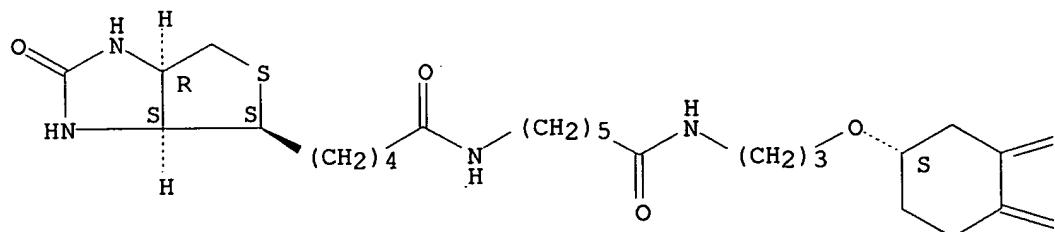
RN 193278-61-4 CAPLUS

CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[6-[[3-[(3 β ,5Z,7E)-25-hydroxy-9,10-secochoesta-5,7,10(19)-trien-3-yl]oxy]propyl]amino]-6-oxohexyl]-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

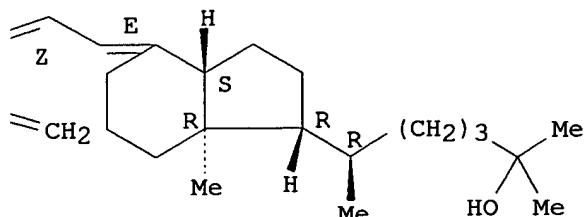
Absolute stereochemistry.

Double bond geometry as described by E or Z.

PAGE 1-A



PAGE 1-B



IT 163018-26-6P, 3-O-(2-Aminoethyl)-25-hydroxy-vitamin D3

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

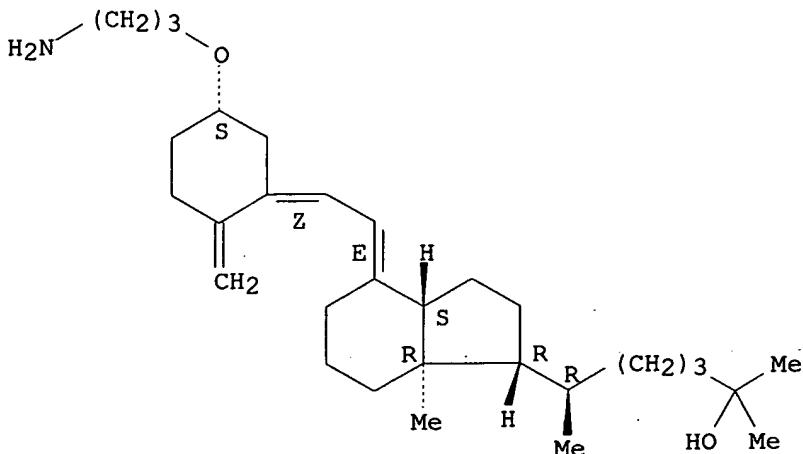
(preparation of functional vitamin D derivs. and a method for determining 25-hydroxy-vitamin D and $1\alpha,25$ -dihydroxy-vitamin D metabolites)

RN 163018-26-6 CAPLUS

CN 9,10-Secoccholesta-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-, (3 β ,5Z,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:549275 CAPLUS
DOCUMENT NUMBER: 127:158793
TITLE: Labeled vitamin D compounds and the use thereof
INVENTOR(S): Holick, Michael F.; Ray, Rahul
PATENT ASSIGNEE(S): A & D Assay Inc., USA; Holick, Michael F.; Ray, Rahul
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9724127	A1	19970710	WO 1996-US20341	19961227
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2239617	A1	19970710	CA 1996-2239617	19961227
AU 9714293	A	19970728	AU 1997-14293	19961227
EP 873126	A1	19981028	EP 1996-944506	19961227
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000503641	T	20000328	JP 1997-524458	19961227
US 6291693	B1	20010508	US 1998-91184	19980610
US 6229030	B1	20010508	US 1999-345789	19990701
US 2002107411	A1	20020808	US 2001-810624	20010319
US 6455714	B2	20020924		
PRIORITY APPLN. INFO.:				
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		WO 1996-US20341	W	19961227
		US 1998-91184	A1	19980610
		US 1999-345789	A3	19990701

OTHER SOURCE(S): MARPAT 127:158793
AB Biotin, fluorescent and chemiluminescent labeled Vitamin D compds. are disclosed as well as their use in assays for the presence of vitamin D, its metabolites and vitamin D analogs in biol. fluids. One example gives the preparation of a biotin conjugate of vitamin D3-3-aminopropyl ether.
IT 163018-26-6DP, reaction product with fluorescein derivs.
193278-59-0P 193278-60-3P 193278-61-4P
193278-65-8P

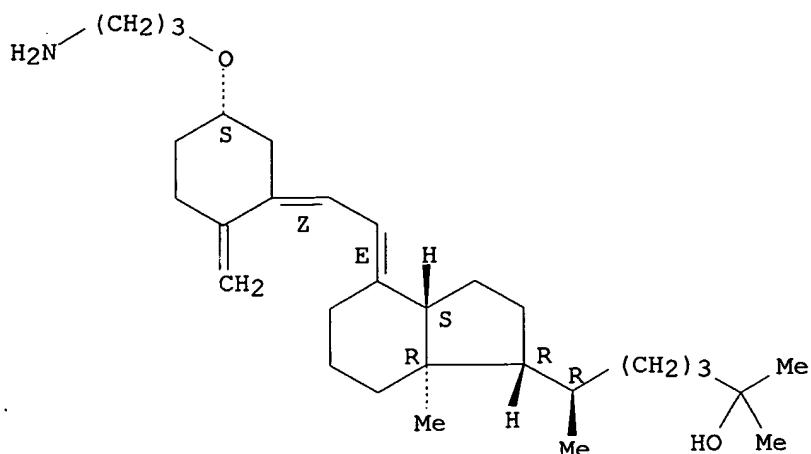
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(fluorescent and chemiluminescent labeled vitamin D derivs.)

RN 163018-26-6 CAPLUS

CN 9,10-Secocista-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-,
(3 β ,5 Z ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



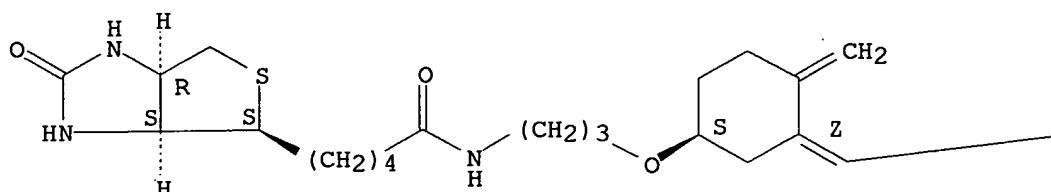
RN 193278-59-0 CAPLUS

CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[3-[(3 β ,5 Z ,7E)-
25-hydroxy-9,10-secoista-5,7,10(19)-trien-3-yl]oxy]propyl]-2-oxo-,
[3aS-(3a α ,4 β ,6a α)]- (9CI) (CA INDEX NAME)

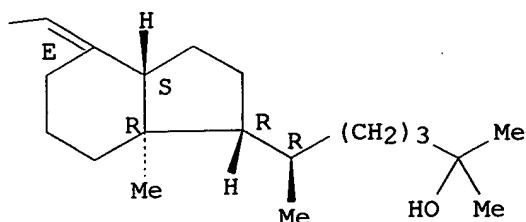
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

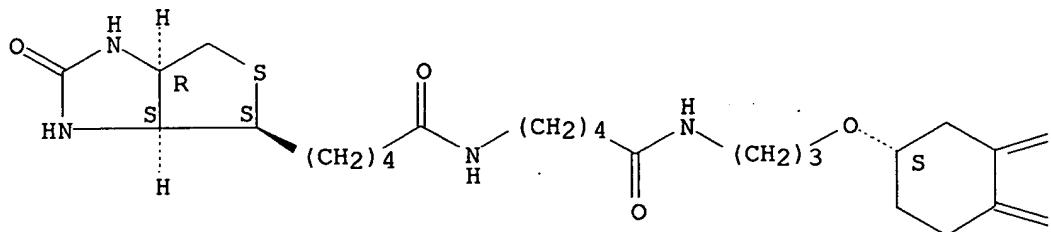


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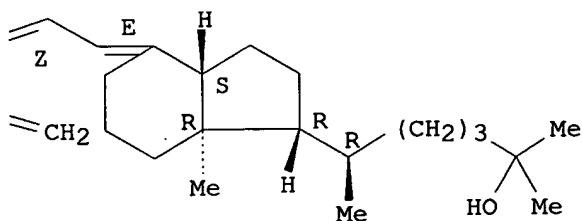
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[5-[(3 β ,5Z,7E)-25-hydroxy-9,10-secochoesta-5,7,10(19)-trien-3-yl]oxy]propyl]amino]-5-oxopentyl]-2-oxo-, [3aS-(3a α ,4 β ,6a α)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



PAGE 1-B

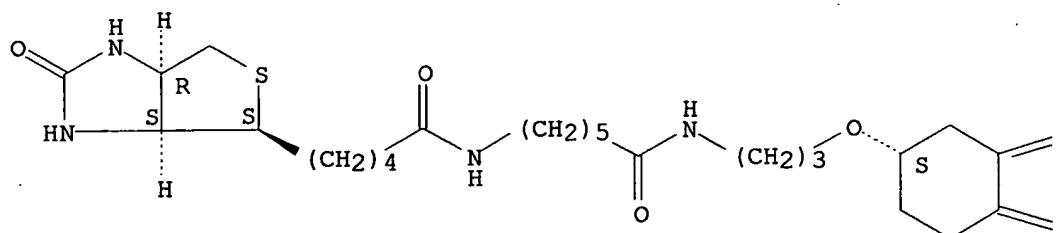


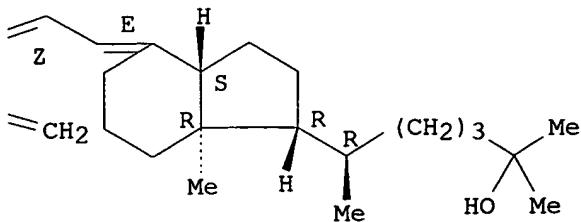
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CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[6-[(3 β ,5Z,7E)-25-hydroxy-9,10-secochoesta-5,7,10(19)-trien-3-yl]oxy]propyl]amino]-6-oxohexyl]-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



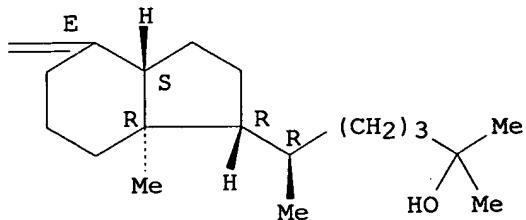
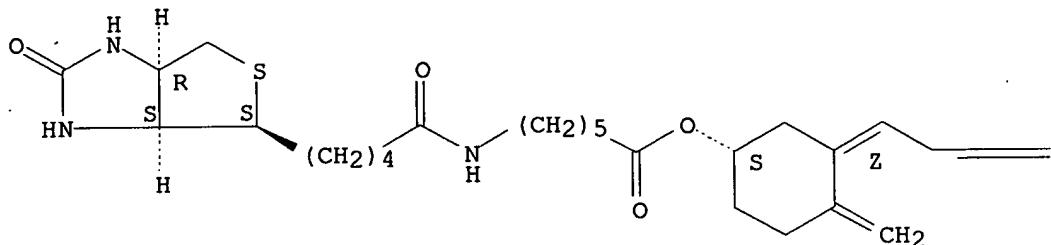


RN 193278-65-8 CAPLUS

CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[6-[[(3β,5Z,7E)-25-hydroxy-9,10-secocholest-5,7,10(19)-trien-3-yl]oxy]-6-oxohexyl]-2-oxo-, [3aS-(3aα,4β,6aα)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



IT 163018-26-6

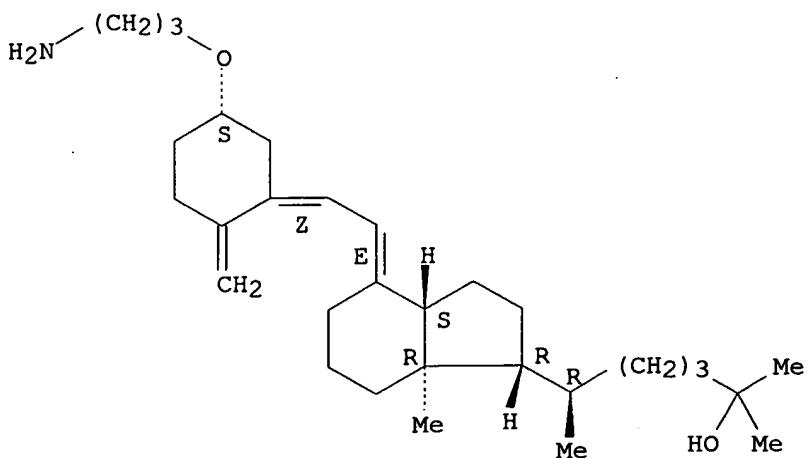
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorescent and chemiluminescent labeled vitamin D derivs.)

RN 163018-26-6 CAPLUS

CN 9,10-Secocista-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-,
(3β,5Z,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 193278-63-6P 193278-64-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (fluorescent and chemiluminescent labeled vitamin D derivs.)

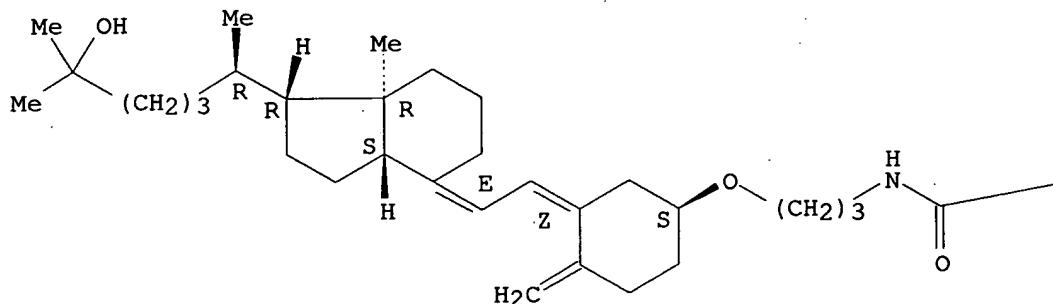
RN 193278-63-6 CAPLUS

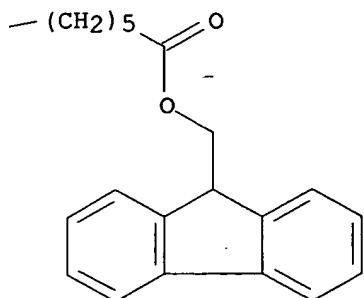
CN Heptanoic acid, 7-[(3β,5Z,7E)-25-hydroxy-9,10-secocholest-5,7,10(19)-trien-3-yl]oxy]propylamino-, 9H-fluoren-9-ylmethyl ester
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



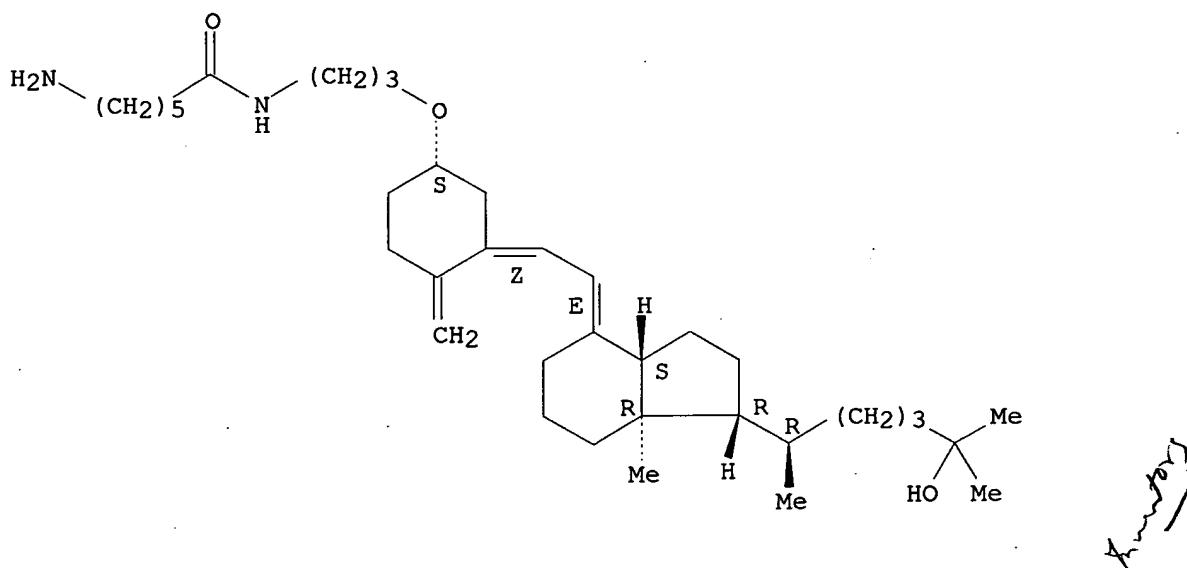


RN 193278-64-7 CAPLUS

CN Hexanamide, 6-amino-N-[3-[(3 β ,5 β ,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl]oxy]propyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



=> s 14 not 15

L6 12 L4 NOT L5

=> d 16 ibib abs hitstr tot

L6 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:221920 CAPLUS

DOCUMENT NUMBER: 138:251112

TITLE: Competitive immunoassay for the determination of
Vitamin D compounds in serum and plasma

INVENTOR(S): Armbruster, Franz Paul; Friedl, Sabine

PATENT ASSIGNEE(S): Immundiagnostik Ag, Germany

SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003023391	A2	20030320	WO 2002-EP9740	20020830
WO 2003023391	A3	20031218		
W: US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
DE 10144905	A1	20030410	DE 2001-10144905	20010912
DE 10144905	C2	20030731		

PRIORITY APPLN. INFO.: DE 2001-10144905 A 20010912

AB The invention relates to a method and a sample buffer for a direct measuring assay in order to determine vitamin D compds. such as 25-hydroxyl-vitamin-D2, 25-hydroxy-vitamin-D3. 1 α ,25-dihydroxy-vitamin-D2, 1 α ,25-dihydroxy-vitamin-D3. in plasma or serum. The assay is based on a protein binding anal. on antibodies in place of the vitamin-D binding protein- in relation to the vitamin D compound to be determined, and the sample and anal. buffer contains at least 0.05 weight % soluble

hydroxylated aromatic carboxylic acid or a salt thereof for a slightly acid pH, preferably 1-7 weight % sodium or potassium salicylate for a pH ranging between 3.0 und 7.0, and optionally cyclodextrin.

IT 502421-69-4

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (immobilization of via streptavidin; competitive immunoassay for determination

of Vitamin D compds. in serum and plasma)

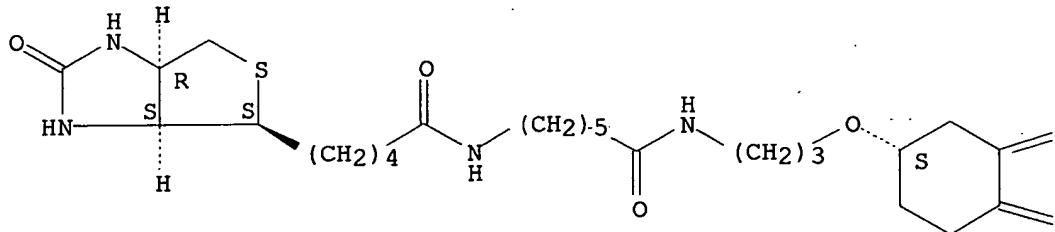
RN 502421-69-4 CAPLUS

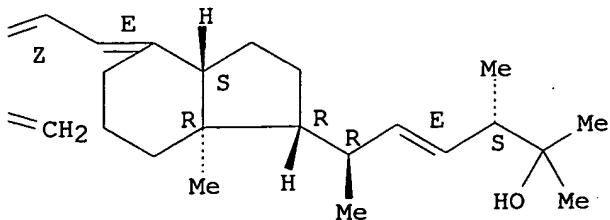
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, hexahydro-N-[6-[[3-[(3 β ,5 β ,7E,22E)-25-hydroxy-9,10-secoergosta-5,7,10(19),22-tetraen-3-yl]oxy]propyl]amino]-6-oxohexyl]-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.

PAGE 1-A





L6 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:417035 CAPLUS

ACCESSION NUMBER: 1990.011.01
DOCUMENT NUMBER: 129:146544

DOCUMENT NUMBER: 12345678
TITLE: Enzyme-linked immunosorbent assay for plasma
24,25-dihydroxyvitamin D3

AUTHOR(S): Higashi, Tatsuya; Kobayashi, Norihiro; Ohmi, Hidenori;
Hayashi, Youko; Shimada, Kazutake

CORPORATE SOURCE: Fac. Pharmaceutical Sciences, Kanazawa Univ.,
Kanazawa, 920, Japan

SOURCE: *Analytica Chimica Acta* (1998), 365(1-3), 151-158
CODEN: ACACAM; ISSN: 0003-2670

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A highly sensitive ELISA (ELISA) of (24R)-24,25-dihydroxyvitamin D₃

[24,25(OH)2D3] has been developed for measuring its plasma levels. An antibody elicited against 24,25(OH)2D3 3-hemiglutarate conjugated with bovine serum albumin was used for this purpose. Two enzyme (β -galactosidase)-labeled antigens linked with the above hapten or its homolog (succinate) were prepared by the N-succinimidyl ester method. Both homologous and bridge-heterologous ELISA systems employing the sequential saturation method exhibited a high sensitivity with a midpoint of pg, which was about one-tenth of the conventional competitive protein binding assay. A lipid extract from plasma was treated with alkaline buffer

and purified with an Isolute C18 (EC) cartridge, and 24,25(OH)2D₃ levels were determined with the homologous ELISA. This ELISA afforded reliable plasma 24,25(OH)2D₃ levels which were confirmed by a serial dilution study and recovery test. The overall recovery rate through the pretreatment was satisfactory and constant (84.7±4.3%, n=52, mean±SD), and recovery revision by the addition of ³H-labeled compound to each plasma sample was omitted. Intra- and inter-assay coeffs. of variation were less than 13%.

TT 210956-53-9P

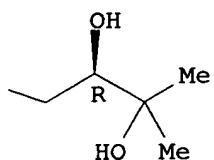
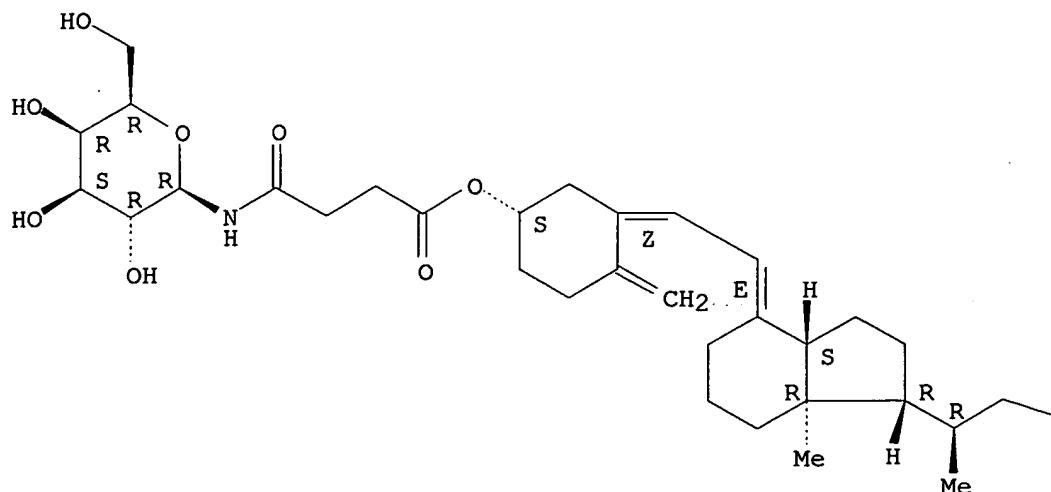
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(ELISA for plasma 24,25-dihydroxyvitamin D3)

RN 210956-53-9 CAPLUS

14. CN 9,10-Secococholesta-5,7,10(19)-triene-3,24,25-triol, 3-[4-(β -D-galactopyranosylamino)-4-oxobutanoate], (3 β ,5Z,7E,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 210956-55-1

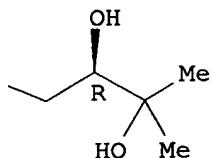
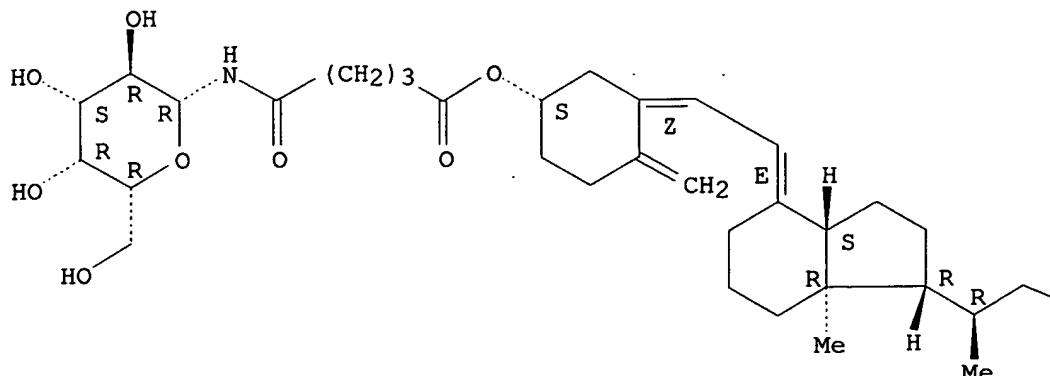
RL: RCT (Reactant); RACT (Reactant or reagent)
(ELISA for plasma 24,25-dihydroxyvitamin D3)

RN 210956-55-1 CAPLUS

CN 9,10-Secocista-5,7,10(19)-triene-3,24,25-triol, 3-[5-(β-D-galactopyranosylamino)-5-oxopentanoate], (3β,5Z,7E,24R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



REFERENCE COUNT:

22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:745339 CAPLUS

DOCUMENT NUMBER: 123:228629

TITLE: Aminopropylation of vitamin D hormone
($1\alpha,25$ -dihydroxyvitamin D3), its biological
precursors, and other steroidal alcohols: an anchoring
moiety for affinity studies of sterols.

AUTHOR(S): Roy, Aloka; Ray, Rahul

CORPORATE SOURCE: Bioorganic Protein Chemistry, Boston Univ. School
Medicine, Boston, MA, 02118, USASOURCE: Steroids (1995), 60(8), 530-3
CODEN: STEDAM; ISSN: 0039-128X

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 123:228629

AB A simple two-step procedure for the conversion of several steroidal alcs. to their aminopropyl ether derivs. was described. To demonstrate the usefulness of this procedure we synthesized a second-generation photoaffinity labeling analog of $1\alpha,25$ -dihydroxyvitamin D3, and a 25-hydroxyvitamin D3 derivative containing a long and chemical stable tether. Utilities of these aminopropyl ether derivs. of steroids in various

affinity studies of receptor proteins are discussed.

IT 163018-26-6

RL: RCT (Reactant); RACT (Reactant or reagent)

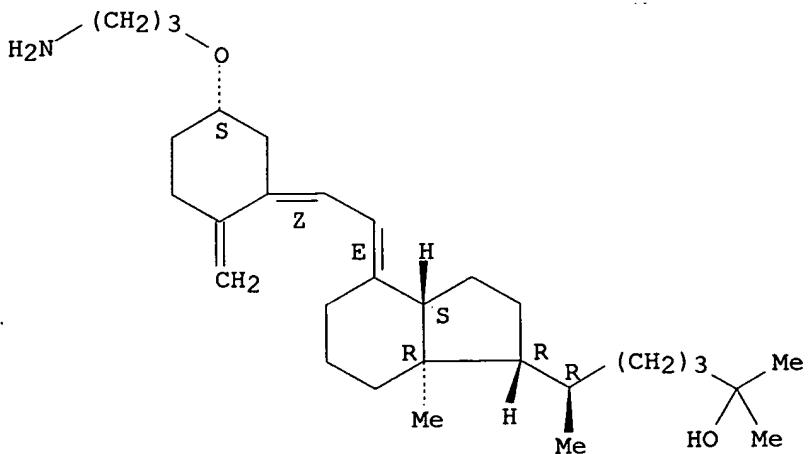
(aminopropylation of vitamin D hormone ($1\alpha,25$ -dihydroxyvitamin D3), biol. precursors, and other steroid alcs. as anchoring moiety for affinity studies of sterols)

RN 163018-26-6 CAPLUS

CN 9,10-Secocista-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-, (3 β ,5 α ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 168418-08-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(aminopropylation of vitamin D hormone ($1\alpha,25$ -dihydroxyvitamin D3), biol. precursors, and other steroid alcs. as anchoring moiety for affinity studies of sterols)

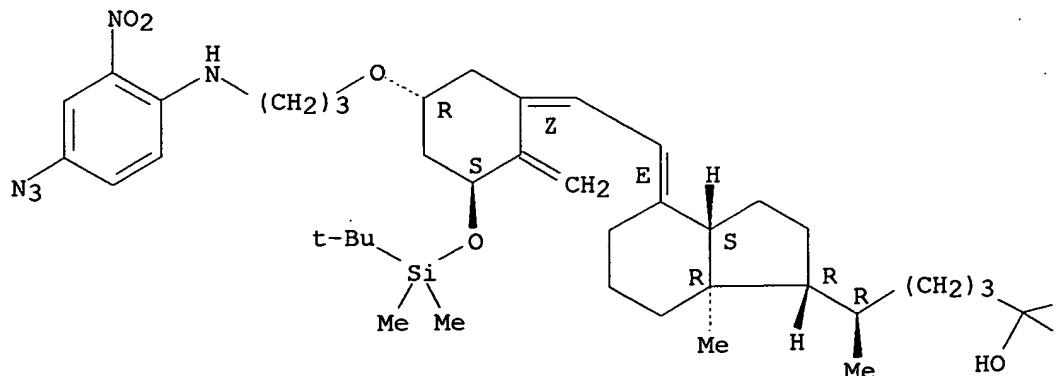
RN 168418-08-4 CAPLUS

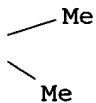
CN 9,10-Secocista-5,7,10(19)-trien-25-ol, 3-[3-[(4-azido-2-nitrophenyl)amino]propoxy]-1-[(1,1-dimethylethyl)dimethylsilyl]oxy)-, (1 α ,3 β ,5 α ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

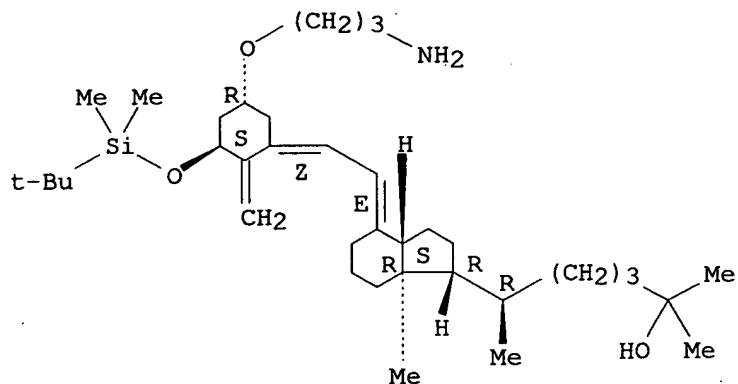
PAGE 1-A





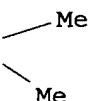
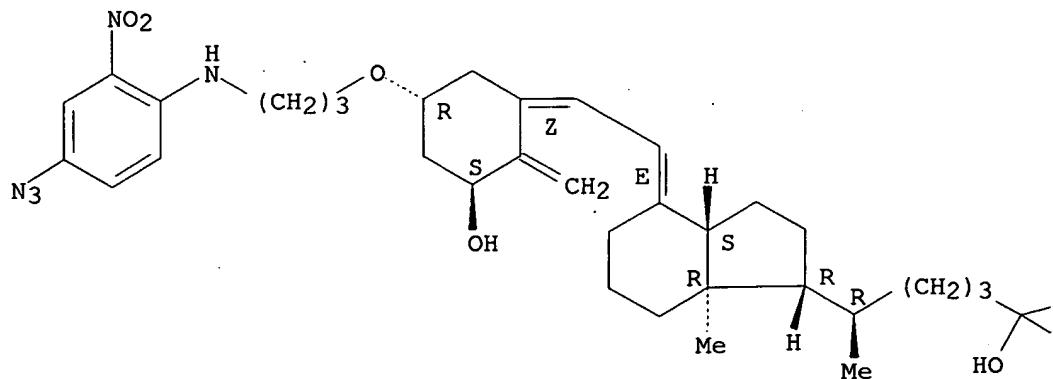
IT 120983-73-5P 168418-09-5P 168418-12-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (aminopropylation of vitamin D hormone (1 α ,25-dihydroxyvitamin D3), biol. precursors, and other steroid alcs. as anchoring moiety for affinity studies of sterols)
 RN 120983-73-5 CAPLUS
 CN 9,10-Secocholesta-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-1-[(1,1-dimethylethyl)dimethylsilyl]oxy]-, (1 α ,3 β ,5Z,7E)- (9CI) (CA
 INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



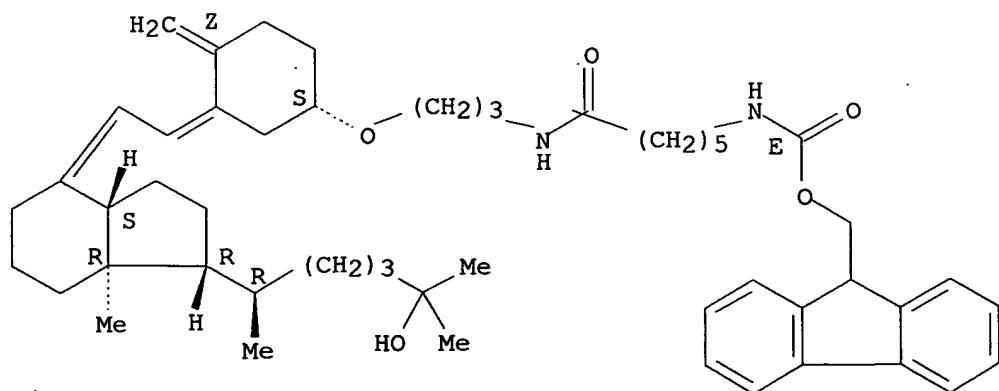
RN 168418-09-5 CAPLUS
CN 9,10-Secocholesta-5,7,10(19)-triene-1,25-diol, 3-[3-[(4-azido-2-nitrophenyl)amino]propoxy]-, (1 α ,3 β ,5Z,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 168418-12-0 CAPLUS
 CN Carbamic acid, [6-[[3-[(3 β ,5 Z ,7 E)-25-hydroxy-9,10-secocholest-5,7,10(19)-trien-3-yl]oxy]propyl]amino]-6-oxohexyl]-, 9H-fluoren-9-ylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as described by E or Z.

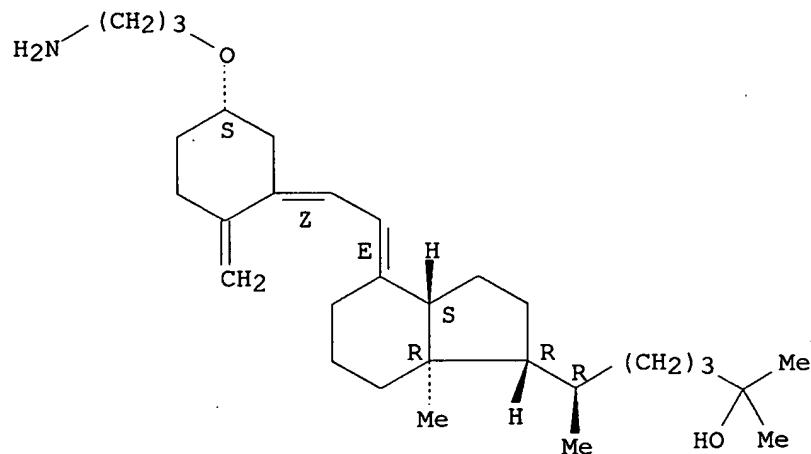


L6 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1995:492952 CAPLUS
 DOCUMENT NUMBER: 122:285776
 TITLE: Affinity purification of human plasma vitamin D-binding protein
 AUTHOR(S): Swamy, Narasimha; Roy, Aloka; Chang, Richard; Brisson, Marni; Ray, Rahul
 CORPORATE SOURCE: Dep. Med., Boston Univ. Medical Cent., Boston, MA, 02118, USA
 SOURCE: Protein Expression and Purification (1995), 6(2), 185-8
 CODEN: PEXPEJ; ISSN: 1046-5928
 PUBLISHER: Academic
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB During the course of studies to probe the vitamin D ligand-binding domains of vitamin D-binding protein and vitamin D receptor, the authors developed a synthetic procedure to modify the 3β -hydroxyl group of vitamin D₃ and its 25-hydroxy- and 1,25-dihydroxy metabolites with a 3'-aminopropyl ether group. In the present study they coupled 25-hydroxyvitamin D₃-3 β -3'-aminopropyl ether to an activated Sepharose matrix. Using this stable and reusable affinity matrix they purified human vitamin D-binding protein from human plasma to homogeneity.

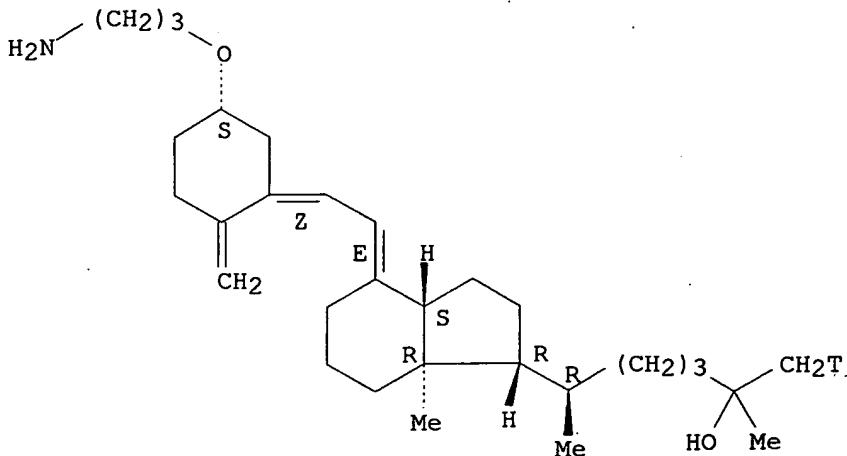
IT 163018-26-6DP, Sepharose conjugates
 RL: NNU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (affinity purification of human plasma vitamin D-binding protein)
 RN 163018-26-6 CAPLUS
 CN 9,10-Secocholesta-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-, (3 β ,5 ζ ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



IT 163018-25-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (affinity purification of human plasma vitamin D-binding protein)
 RN 163018-25-5 CAPLUS
 CN 9,10-Secocholesta-5,7,10(19)-trien-26-t-25-ol, 3-(3-aminopropoxy)-, (3 β ,5 ζ ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



L6 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:20633 CAPLUS

DOCUMENT NUMBER: 118:20633

TITLE: Production and specificity of antisera raised against 25-hydroxyvitamin D3-[C-3]-bovine serum albumin conjugates

AUTHOR(S): Kobayashi, Norihiro; Ueda, Kaoru; Kitahori, Junichi; Shimada, Kazutake

CORPORATE SOURCE: Fac. Pharm. Sci., Kanazawa Univ., Kanazawa, 920, Japan

SOURCE: Steroids (1992), 57(10), 488-93

CODEN: STEDAM; ISSN: 0039-128X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In order to obtain specific antisera for use in the enzyme immunoassay of 25-hydroxyvitamin D3, three haptene-carrier conjugates having different lengths of bridges at the C-3 position were prepared from 25-hydroxyvitamin D3 by coupling with bovine serum albumin using the active ester method. The specificity of anti-25-hydroxyvitamin D3 antisera elicited in rabbits was tested by a cross-reaction study with closely related secosterols and by measuring the plasma levels of 25-hydroxyvitamin D3 by means of RIA using tritium-labeled antigen. The results indicated that the specificity of the antisera obtained is higher than that of vitamin D-binding protein, and that some of these antisera are suitable for enzyme immunoassay.

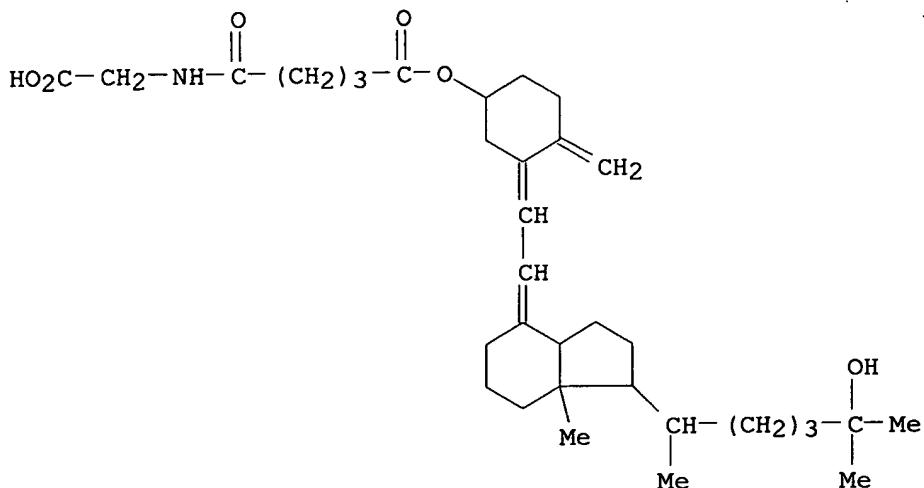
IT 145152-06-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction with albumin of, antisera in relation to)

RN 145152-06-3 CAPLUS

CN 9,10-Secocolesta-5,7,10(19)-triene-3,25-diol, 3-[5-[(carboxymethyl)amino]-5-oxopentanoate], (3 β ,5 α ,7E)- (9CI) (CA INDEX NAME)



L6 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:84004 CAPLUS

DOCUMENT NUMBER: 116:84004

TITLE: Synthesis and assignment of novel iodine-125-labeled 1_a,25-dihydroxyvitamin D₃ derivatives

AUTHOR(S): Tanabe, Miyuki; Harada, Masaya; Odawara, Fumitomo; Ikuta, Shigeru; Nakagawa, Nobuaki; Otani, Masaru

CORPORATE SOURCE: Res. Lab., Toyo Jozo Co., Ltd., 410-23, Japan

Journal of Nutritional Science and Vitaminology

(1991), 37(2), 139-47

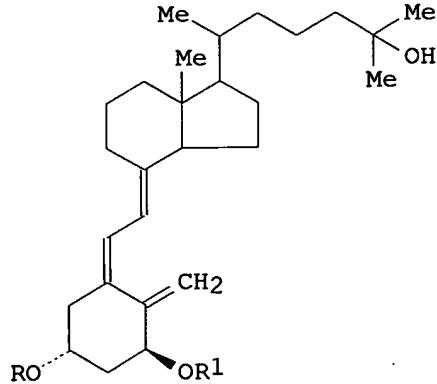
CODEN: JNSVA5; ISSN: 0

DOCUMENT TYPE: Journal

DOCUMENT TYPE: Journal
LANGUAGE: English

LANGUAGE: English
GT

GI



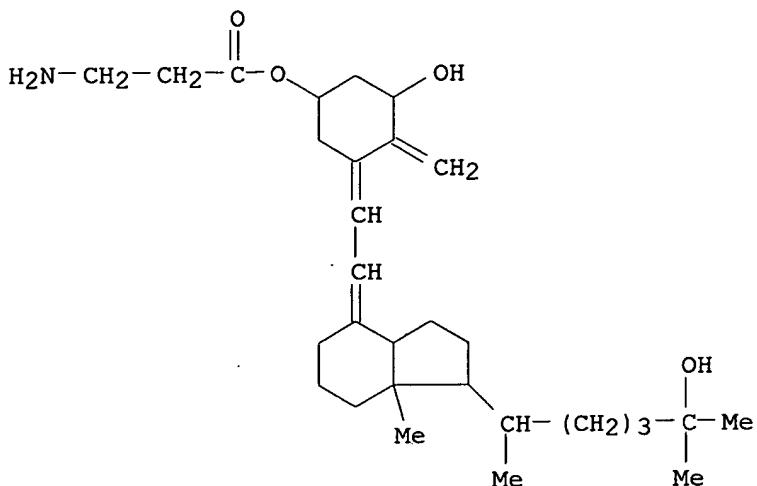
I

AB Title compds. I [$R = 3,4-125I(HO)C_6H_3CH_2CH_2CONHCH_2CH_2CO$ (R2), $R_1 = H$; $R = H$, $R_1 = R_2$] were prepared from I ($R = R_1 = H$) by treatment with 9-fluorenylmethoxy- β -alanine, deblocking, and acylation with labeled Bolton-Hunter reagent. I ($R = R_2$, $R_1 = H$; $R = H$, $R_1 = R_2$) are useful as tracers in RIA with sp. radioactivity 2200 Ci/mmol.

IT 130779-61-2P

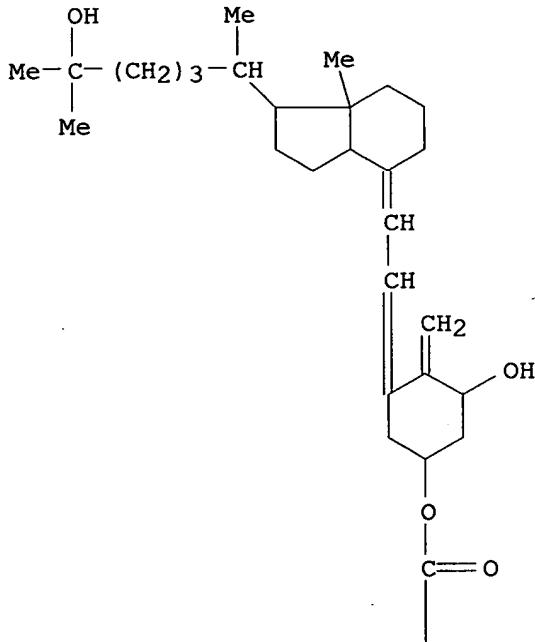
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acylation of, by labeled Bolton-Hunter reagent)

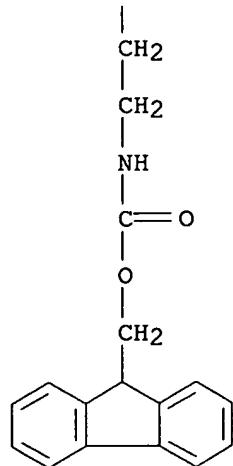
RN 130779-61-2 CAPLUS
CN β -Alanine, (1 α ,3 β ,5 Z ,7E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)



IT 130779-58-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and deblocking of)
RN 130779-58-7 CAPLUS
CN β -Alanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-,
(1 α ,3 β ,5 ζ ,7E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-trien-
3-yl ester (9CI) (CA INDEX NAME)

PAGE 1-A

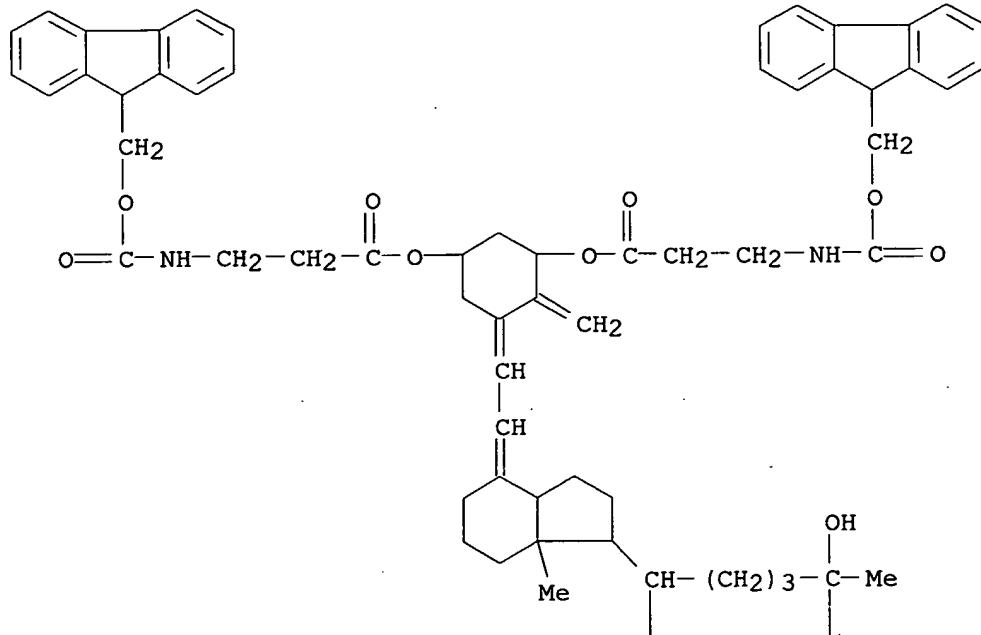




IT 130779-60-1P 130779-63-4P 137208-55-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 130779-60-1 CAPLUS

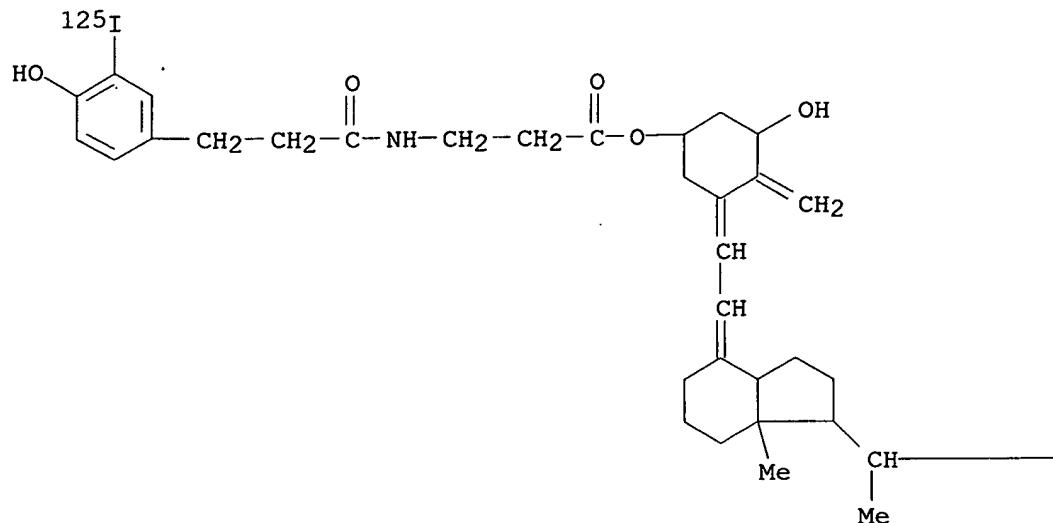
CN β -Alanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-,
 (1 α ,3 β ,5Z,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-triene-
 1,3-diyl ester (9CI) (CA INDEX NAME)



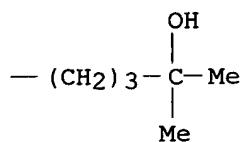
RN 130779-63-4 CAPLUS

CN β -Alanine, N-[3-[4-hydroxy-3-(iodo-125I)phenyl]-1-oxopropyl]-, (1 α ,3 β ,5Z,7E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)

PAGE 1-A

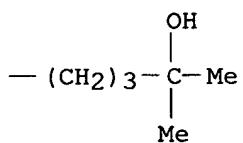
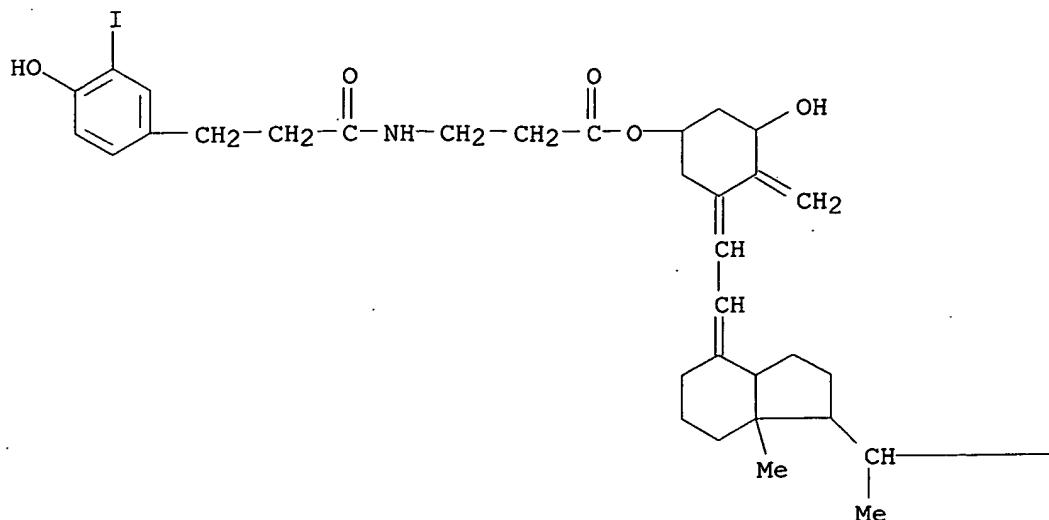


PAGE 1-B



RN 137208-55-0 CAPLUS

CN β -Alanine, N-[3-(4-hydroxy-3-iodophenyl)-1-oxopropyl]-, (1 α ,3 β ,5Z,7E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:466996 CAPLUS

DOCUMENT NUMBER: 115:66996

TITLE: Photoaffinity labeling of human serum vitamin D binding protein and chemical cleavages of the labeled protein: identification of an 11.5-KDa peptide containing the putative 25-hydroxyvitamin D3 binding site

AUTHOR(S): Ray, Rahul; Bouillon, Roger; Van Baelen, Hugo; Holick, Michael F.

CORPORATE SOURCE: Sch. Med., Boston Univ., Boston Univ., MA, 02118, USA

SOURCE: Biochemistry (1991), 30(30), 7638-42

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal

LANGUAGE:

English

AB Photoaffinity labeling and related studies of human serum vitamin D binding protein (hDBP) with 25-hydroxyvitamin D3 3β -3'-[N-(4-azido-2-nitrophenyl)amino]propyl ether (25-ANE) and its radiolabeled counterpart, i.e., 25-hydroxyvitamin D3 3β -3'-[N-(4-azido-2-nitro-[3,5-3H]phenyl)amino]propyl ether (3H-25-ANE) are described. The 25-ANE competes with 25-OH-D3 for the binding site of the latter in hDBP and 3H-25-ANE is capable of covalently labeling the hDBP when exposed to UV light. Treatment of a sample of purified hDBP, labeled with 3H-25-ANE, with BNPS-skatole produced two Coomassie Blue stained peptide fragments, and the majority of the radioactivity was associated with the smaller of the two peptide fragments (16.5 kDa). On the other hand, cleavage of the labeled protein with cyanogen bromide produced a peptide (11.5 kDa) containing most of the covalently attached radioactivity. Considering the primary amino acid structure of hDBP, this peptide fragment (11.5 kDa) represents the N-terminus through residue 108 of the intact protein. Thus, results tentatively identify this segment of the protein containing the binding pocket for 25-OH-D3.

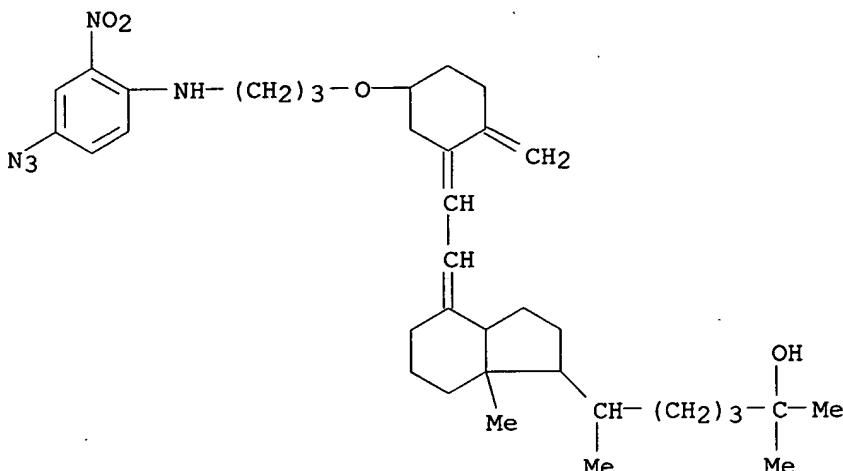
IT 133191-08-9

RL: BIOL (Biological study)

(vitamin D-binding protein hydroxy vitamin D3-binding site of human blood serum photoaffinity labeling by)

RN 133191-08-9 CAPLUS

CN 9,10-Secoccholesta-5,7,10(19)-trien-25-ol, 3-[3-[(4-azido-2-nitrophenyl)amino]propoxy]-, (3 β ,5Z,7E)- (9CI) (CA INDEX NAME)



L6 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:224992 CAPLUS

DOCUMENT NUMBER: 114:224992

TITLE: Synthesis of 25-hydroxyvitamin D3 3β -3'-[N-(4-azido-2-nitrophenyl)amino]propylether, a second-generation photoaffinity analog of 25-hydroxyvitamin D3: photoaffinity labeling of rat serum vitamin D-binding protein

AUTHOR(S): Ray, Rahul; Bouillon, Roger; Van Baelen, Hugo; Holic, Michael F.

CORPORATE SOURCE: Sch. Med., Boston Univ., Boston, MA, 02118, USA

SOURCE: Biochemistry (1991), 30(19), 4809-13

CODEN: BICHAW; ISSN: 0006-2960

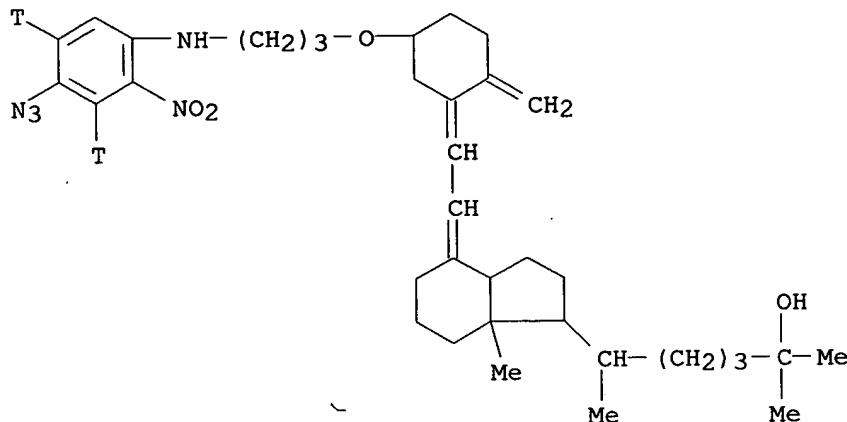
DOCUMENT TYPE: Journal

LANGUAGE: English

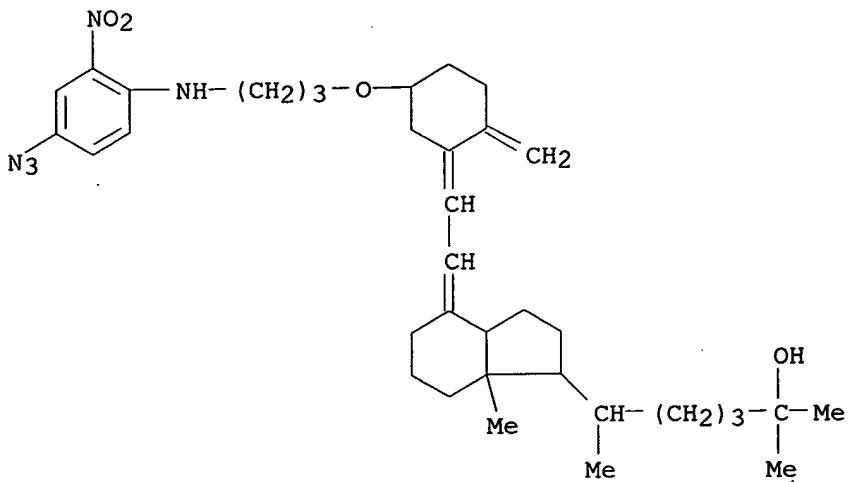
AB Vulnerability of 25-hydroxy-[26,27-3H]vitamin D3 3β -N-(4-azido-2-

nitrophenyl)glycinate, a photoaffinity analog of 25-hydroxyvitamin D3 (25-OH-D3) (Ray et al., 1986) toward standard conditions of carboxymethylation prompted us to synthesize 25-hydroxyvitamin D3 3β -3'-(N-(4-azido-2-nitrophenyl)amino)propyl ether (25-ANE), a hydrolytically stable photoaffinity analog of 25-OH-D3, and 25-hydroxyvitamin D3 3β -3'-(N-(4-azido-2-nitro-[3,5-3H]phenyl)amino)propyl ether (3H-25-ANE), the radiolabeled counterpart of 25-ANE. Competitive binding assays of 25-OH-D3 and 25-ANE with rat serum demonstrated that 25-ANE competes for the 25-OH-D3 binding site in rat serum vitamin D binding protein (rDBP). On the other hand, UV exposure of a sample of purified rat DBP (rDBP), preincubated in the dark with 3H-25-ANE, covalently labeled the protein. However, very little covalent labeling was observed in the absence of UV light or in the presence of a large excess of 25-OH-D3. These results provide strong evidence for the covalent labeling of the 25-OH-D3 binding site in rDBP by 3H-25-ANE.

IT 133191-09-0P
 RL: PREP (Preparation)
 (preparation of)
 RN 133191-09-0 CAPLUS
 CN 9,10-Secocholesta-5,7,10(19)-trien-25-ol, 3-[3-[(4-azido-2-nitrophenyl-3,5-t2)amino]propoxy]-, (3 β ,5 ζ ,7E)- (9CI) (CA INDEX NAME)



IT 133191-08-9P
 RL: PREP (Preparation)
 (preparation of, as photoaffinity label)
 RN 133191-08-9 CAPLUS
 CN 9,10-Secocholesta-5,7,10(19)-trien-25-ol, 3-[3-[(4-azido-2-nitrophenyl)amino]propoxy]-, (3 β ,5 ζ ,7E)- (9CI) (CA INDEX NAME)



L6 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:203161 CAPLUS

DOCUMENT NUMBER: 114:203161

TITLE: Preparation of (radioiodinated) amino acid derivatives of 1 α ,25-dihydroxy vitamin D3 and 24R, 25-dihydroxy vitamin D3, dihydroxy vitamin D3 immunoassays using the derivatives, and production of (monoclonal) antibodies for use in the immunoassays

INVENTOR(S): Tanabe, Miyuki; Ikuta, Shigeru

PATENT ASSIGNEE(S): Toyo Jozo Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

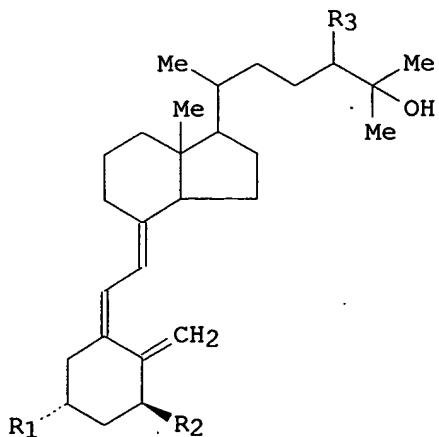
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 363211	A1	19900411	EP 1989-310233	19891005
EP 363211	B1	19940706		
R: CH, DE, FR, LI, NL				
JP 02101060	A	19900412	JP 1988-251661	19881005
JP 02104570	A	19900417	JP 1988-255705	19881011
US 5117018	A	19920526	US 1989-417313	19891005
US 5214170	A	19930525	US 1992-827151	19920127
PRIORITY APPLN. INFO.:				
			JP 1988-251661	A 19881005
			JP 1988-255705	A 19881011
			US 1989-417313	A3 19891005

OTHER SOURCE(S): MARPAT 114:203161

GI



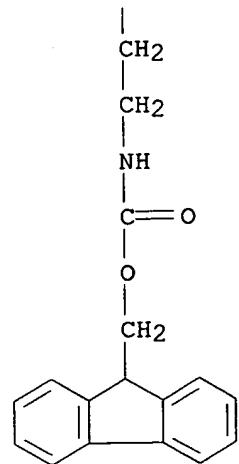
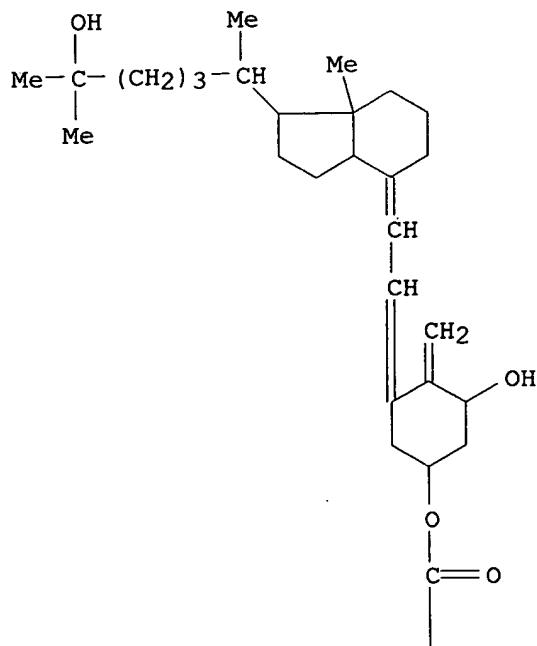
AB The title derivs. comprise I [R1 = OH, OC(O)ANH2 (A = C1-10 alkylene), R2, R3 = H, R1], with the provision that (1) 1 of R2 and R3 is H and the other is OH or OC(O)ANH2, (2) 1 of R1 and R2 is OH and the other in OC(O)ANH2, or (3) 1 of R1 and R3 is OH and the other is OC(O)ANH2. The amine function may contain a group containing an I radioisotope, e.g. 125I. Thus, 1 α , 25-hydroxy vitamin D3 was purified from serum and reacted with 3-(N-fluorenylmethyloxycarbonyl)aminopropionic acid (Fmoc- β -ala; preparation given), and the product was deprotected to yield 1 α -dihydroxy vitamin D3-3 β -O-(3-aminopropionate) (II). II was conjugated to bovine serum albumin, and the conjugate was used to produce antibodies and monoclonal antibodies. II was also reacted with 125I-containing Bolton-Hunter reagent to prepare 1 α -, 25-dihydroxy vitamin D3-3 β -[3-(N-3-(4-hydroxy-3-iodo[125I]phenyl)propionyl)aminopropionate]. The 125I-labeled derivative and anti-1 α , 25-dihydroxy vitamin D3 sheep serum was used in an RIA for determination of 4-1024 pg 1 α , 25-dihydroxy vitamin D3/mL; a standard curve is given.

IT 130779-58-7P 130779-61-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in dihydroxy vitamin D3 (radioiodinated) amino acid derivs. preparation)

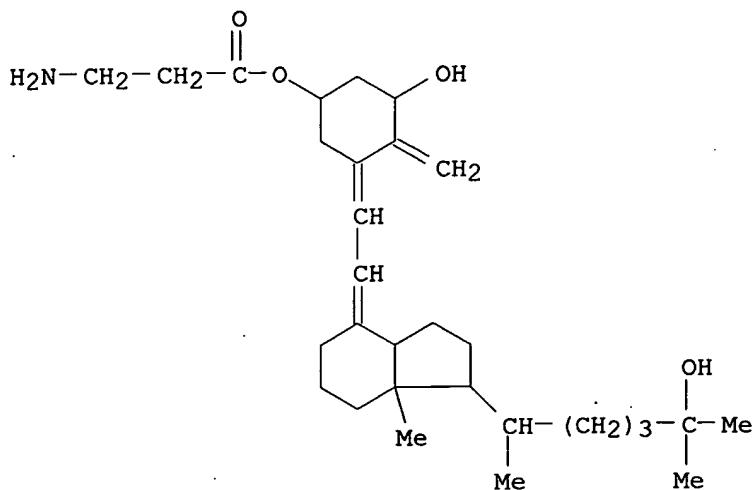
RN 130779-58-7 CAPLUS

CN β -Alanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-, (1 α , 3 β , 5Z, 7E)-1, 25-dihydroxy-9, 10-secocholesta-5, 7, 10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)



RN 130779-61-2 CAPLUS

CN β -Alanine, (1 α ,3 β ,5 α ,7E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)



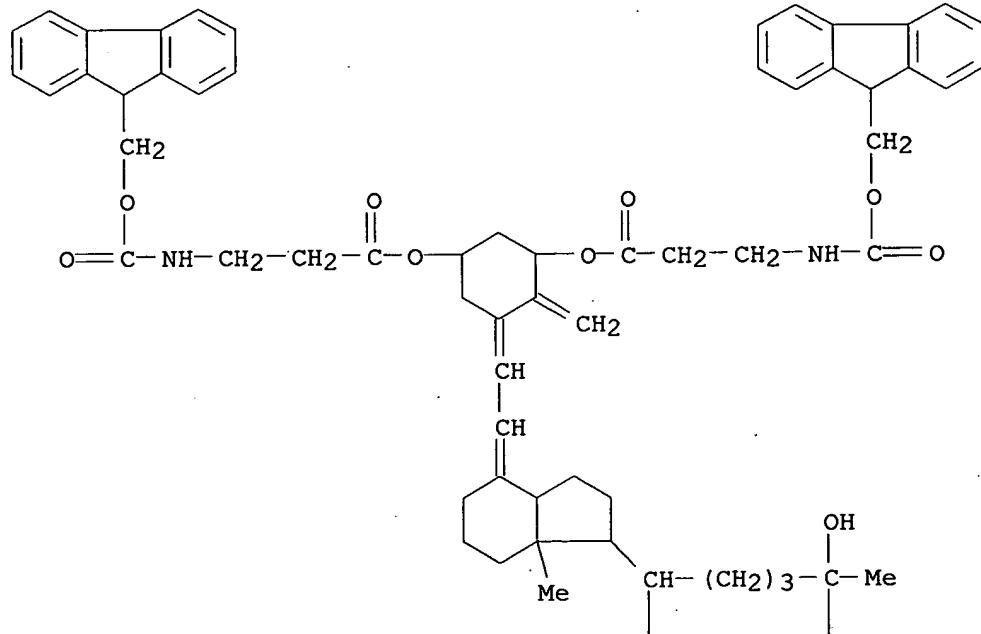
IT 130779-60-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 130779-60-1 CAPLUS

CN β -Alanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-,
(1 α ,3 β ,5Z,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-triene-
1,3-diyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

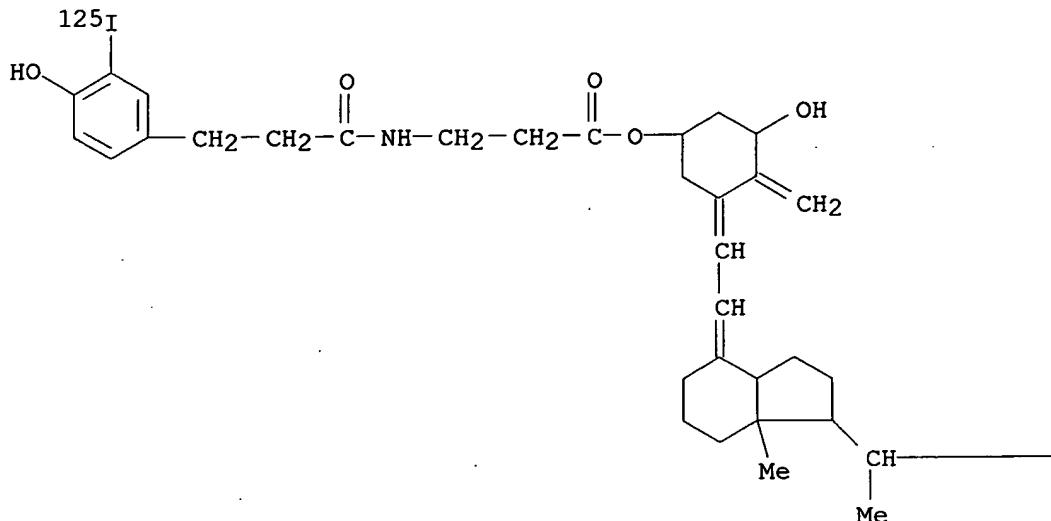


PAGE 2-A

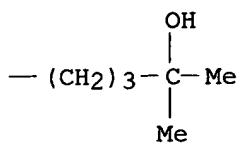


IT 130779-63-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, for dihydroxy vitamin D3 RIA)
 RN 130779-63-4 CAPLUS
 CN β -Alanine, N-[3-[4-hydroxy-3-(iodo-125I)phenyl]-1-oxopropyl]-,
 (1 α ,3 β ,5 α ,7E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-trien-
 3-yl ester (9CI) (CA INDEX NAME)

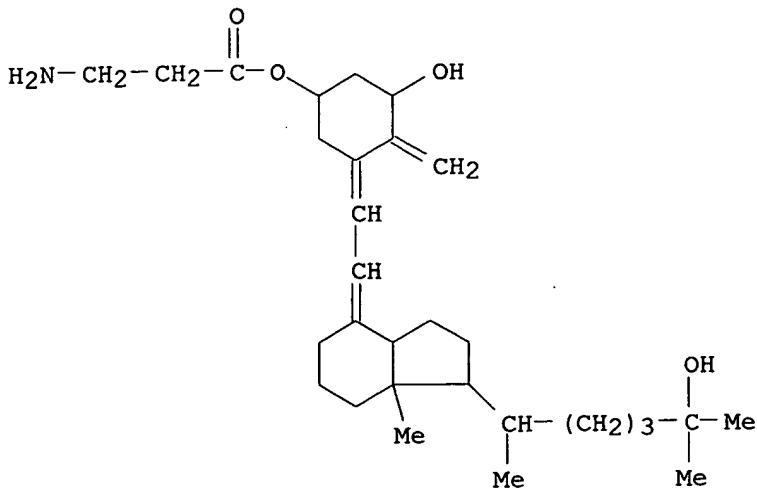
PAGE 1-A



PAGE 1-B



IT 130779-61-2DP, albumin conjugates
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, for immunogen for anti-dihydroxy vitamin D3
 (monoclonal)antibody production for immunoassay)
 RN 130779-61-2 CAPLUS
 CN β -Alanine, (1 α ,3 β ,5 α ,7E)-1,25-dihydroxy-9,10-secocholesta-
 5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:154850 CAPLUS

DOCUMENT NUMBER: 112:154850

TITLE: 25-hydroxy vitamin D3 derivatives for
radioimmunoassays

INVENTOR(S): Nakagawa, Nobuaki; Ikuta, Shigeru; Tanabe, Miyuki

PATENT ASSIGNEE(S): Toyo Jozo Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 312360	A2	19890419	EP 1988-309609	19881013
EP 312360	A3	19891025		
EP 312360	B1	19920617		
R: CH, DE, FR, LI, NL				
JP 02000274	A	19900105	JP 1988-211364	19880825
US 5075465	A	19911224	US 1988-258017	19881014
US 5202266	A	19930413	US 1991-733628	19910722
PRIORITY APPLN. INFO.:			JP 1987-258584	A 19871014
			JP 1988-211364	A 19880825
			US 1988-258017	A3 19881014

OTHER SOURCE(S): CASREACT 112:154850; MARPAT 112:154850

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Radioisotope I-labeled 25-hydroxy vitamin D3 derivs. I (R1 = C1-10 alkylene; R3 = group containing I radioisotope) are prepared for use in competitive RIAs for 25-hydroxy vitamin D3 (II). Thus, 3-(N-9-fluorenyl methyloxy carbonyl)aminopropionic acid 18.7 was reacted with dimethylaminopyridine 7.32 mg and pivaloyl Cl 7.38 μ L in THF 3 mL for 15 min at -15°, and II 24.0 mg was added and reacted for 1 h at 0° and 1 h at room temperature. The purified product was then reacted

with morpholine to yield 25-hydroxy vitamin D₃-3 β -O-(3-aminopropionate), which was used to produce antibody and monoclonal antibody to II, and was also reacted with [125I]Bolton-Hunter reagent and DMAP to yield 125I-labeled derivative III. Antibody, II, and III were used in a competitive RIA for II. Sensitivity was equal to or greater than a prior art assay using ³H labeling.

IT 125363-61-3P 125363-62-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in hydroxy vitamin D₃ derivative preparation

for RIA)

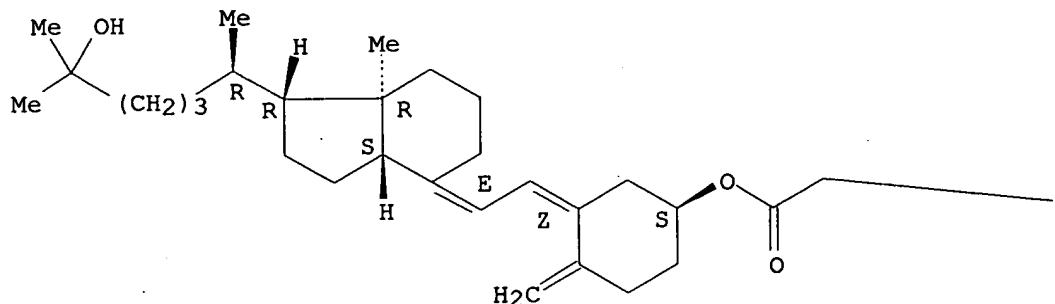
RN 125363-61-3 CAPLUS

CN β -Alanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-,
(3 β ,5Z,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester
(9CI) (CA INDEX NAME)

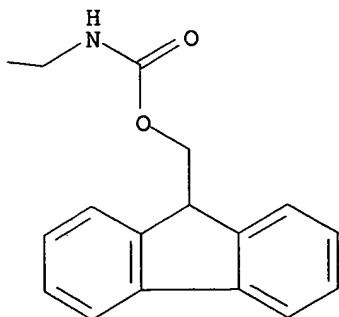
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

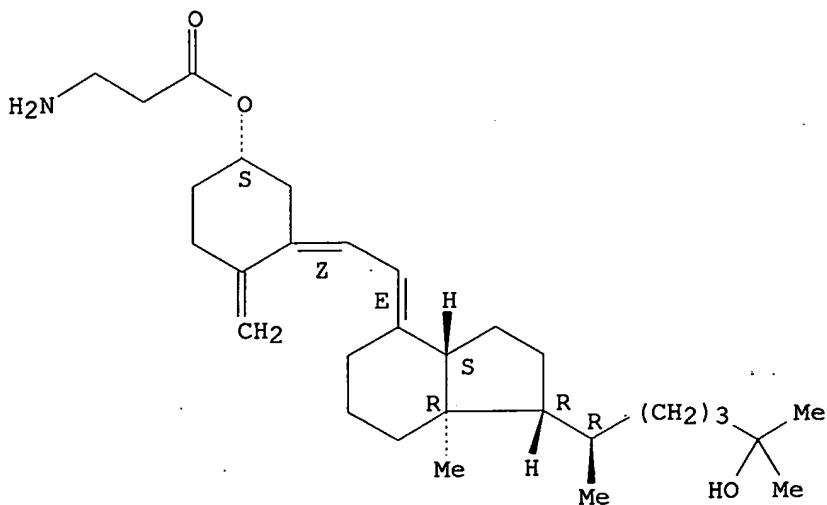


RN 125363-62-4 CAPLUS

CN β -Alanine, (3 β ,5Z,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 126165-94-4P 126165-95-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, for hydroxy vitamin D₃ determination by competitive RIA)

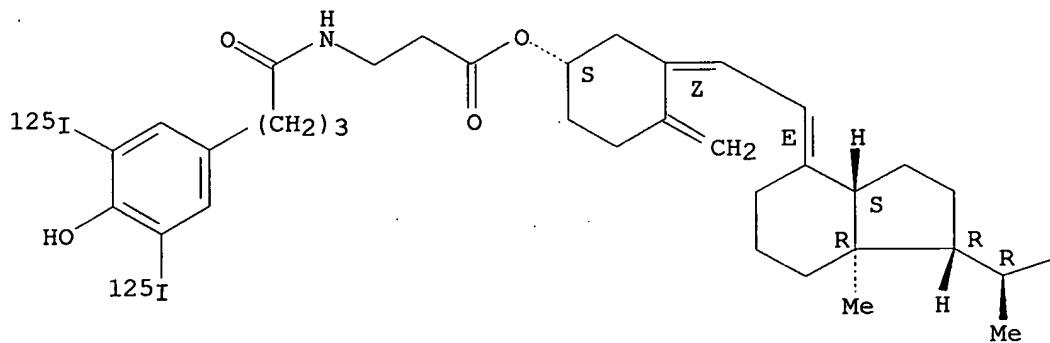
RN 126165-94-4 CAPLUS

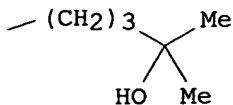
ICN 125I-31-1
CN β -Alanine, N-[4-[4-hydroxy-3,5-di(iodo-125I)phenyl]-1-oxobutyl]-, (3 β ,5Z,7E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

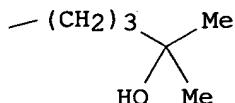
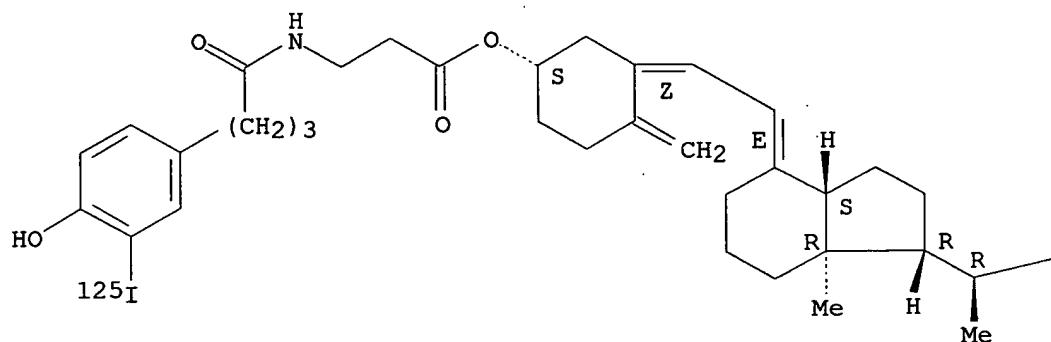
PAGE 1-A





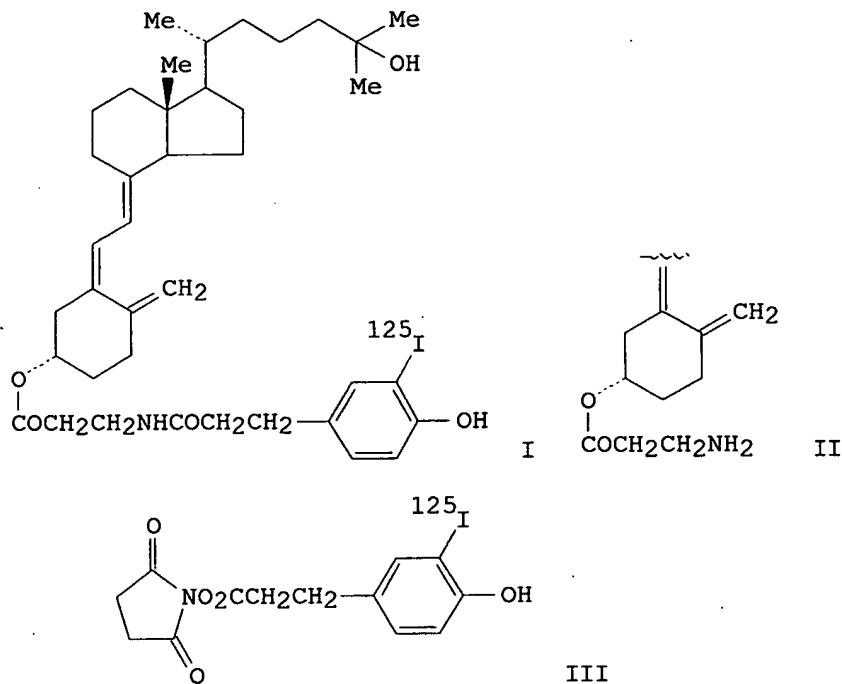
RN 126165-95-5 CAPLUS
 CN β -Alanine, N-[4-[4-hydroxy-3-(iodo-125I)phenyl]-1-oxobutyl]-,
 (3 β ,5Z)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



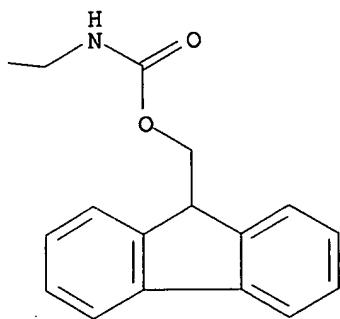
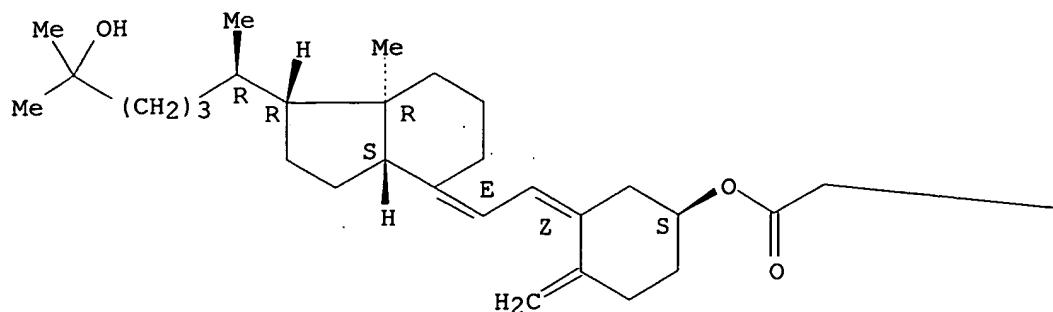
L6 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:98977 CAPLUS
 DOCUMENT NUMBER: 112:98977
 TITLE: Synthesis of a iodine-125 labeled derivative of

AUTHOR(S): 25-hydroxyvitamin D3
 Tanabe, Miyuki; Harada, Masaya; Ikuta, Shigeru;
 Nakagawa, Nobuaki; Otani, Masaru
 CORPORATE SOURCE: Res. Lab., Toyo Jozo Co., Ltd., Ohito, 410-23, Japan
 SOURCE: Journal of the Chemical Society, Chemical
 Communications (1989), (17), 1220-1
 DOCUMENT TYPE: CODEN: JCCCAT; ISSN: 0022-4936
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 112:98977
 GI



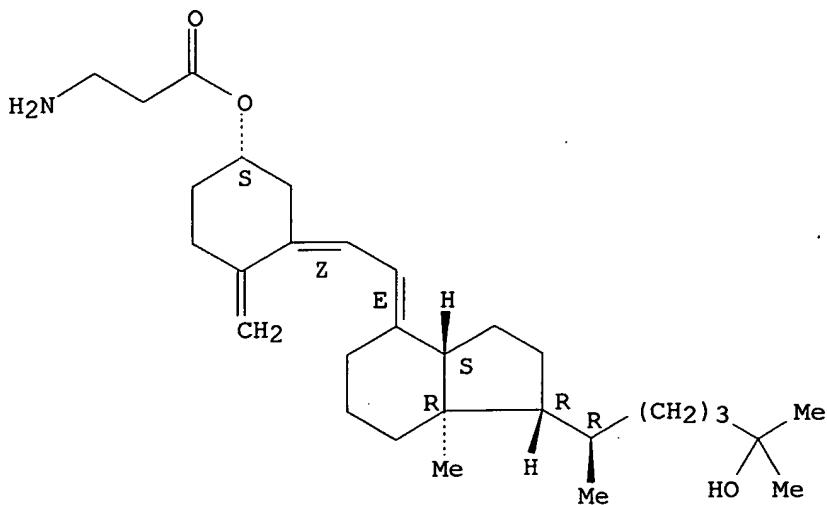
AB Title 125I-labeled derivative I was prepared by treating β -alanine-vitamin D3 derivative II with 125-labeled Bolton-Hunter reagent III.
 IT 125363-61-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and deblocking of)
 RN 125363-61-3 CAPLUS
 CN β -Alanine, N-[$(9H$ -fluoren-9-ylmethoxy)carbonyl]-, (3 β ,5Z)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



IT 125363-62-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and N-acylation of, with iodine-125 Bolton-Hunter reagent)
 RN 125363-62-4 CAPLUS
 CN β -Alanine, (3 β ,5 Z ,7 E)-25-hydroxy-9,10-secocholesta-5,7,10(19)-
 trien-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



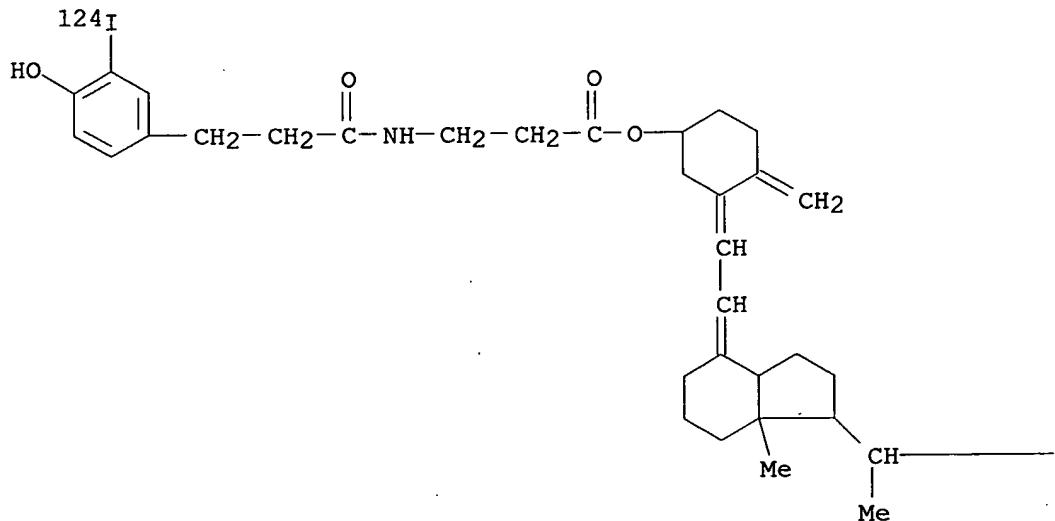
IT 125392-53-2P 125392-54-3P

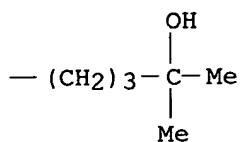
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 125392-53-2 CAPLUS

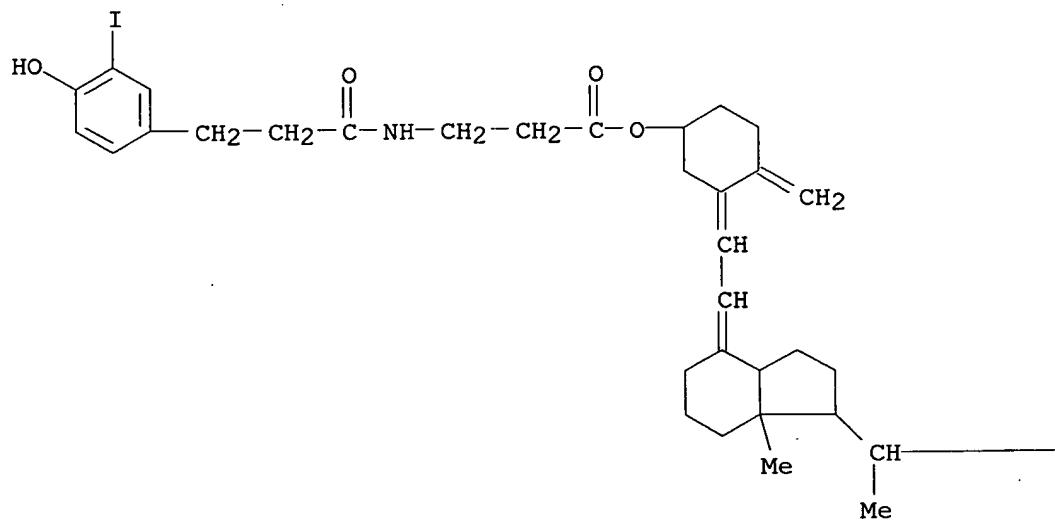
CN β -Alanine, N-[3-[4-hydroxy-3-(iodo-124I)phenyl]-1-oxopropyl]-,
(3 β ,5Z,7E)-25-hydroxy-9,10-secocholest-5,7,10(19)-trien-3-yl ester
(9CI) (CA INDEX NAME)

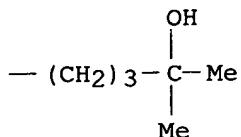
PAGE 1-A



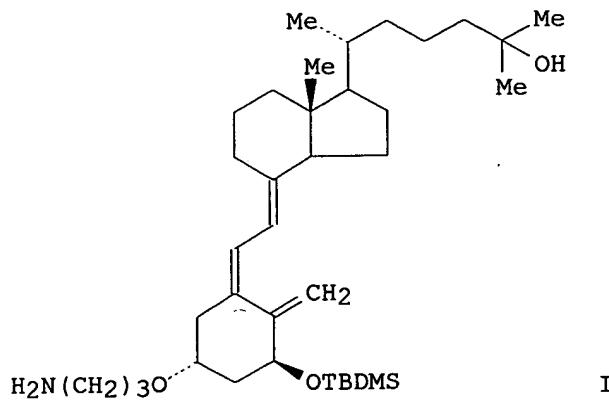


RN 125392-54-3 CAPLUS
 CN β -Alanine, N-[3-(4-hydroxy-3-iodophenyl)-1-oxopropyl]-,
 (3 β ,5Z)-25-hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl ester
 (9CI) (CA INDEX NAME)

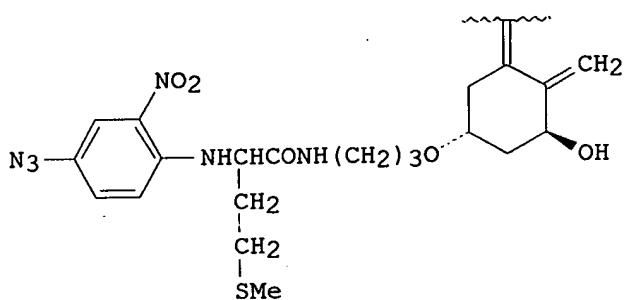




L6 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1989:407667 CAPLUS
DOCUMENT NUMBER: 111:7667
TITLE: Synthesis and biologic evaluation of a second
generation photoaffinity analog of
1,25-dihydroxyvitamin D3
AUTHOR(S): Ray, R.; Holick, M. F.
CORPORATE SOURCE: Sch. Med., Boston Univ., Boston, MA, 02118, USA
SOURCE: Proceedings of the Workshop on Vitamin D (1988),
7th(Vitam. D: Mol., Cell. Clin. Endocrinol.), 60-1
CODEN: PWVDDU; ISSN: 0721-7110
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



II

AB A report on the synthesis of 1,25-dihydroxyvitamin D3 analog I (TBDMS = tert-butyldimethylsilyl). I was coupled to a methionine derivative and then desilylated to give methioninamide II, which is a second generation photoaffinity analog of 1,25-dihydroxyvitamin D3. The binding of II with chick intestinal cytosolic 1,25-dihydroxyvitamin D3 receptor were studied.

IT 120983-73-5P

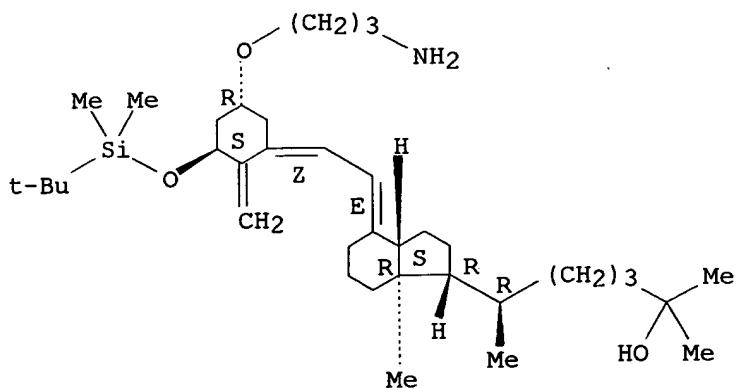
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation of, with methionine derivative)

RN 120983-73-5 CAPLUS

CN 9,10-Secocista-5,7,10(19)-trien-25-ol, 3-(3-aminopropoxy)-1-[(1,1-dimethylethyl)dimethylsilyl]oxy-, (1 α ,3 β ,5Z,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



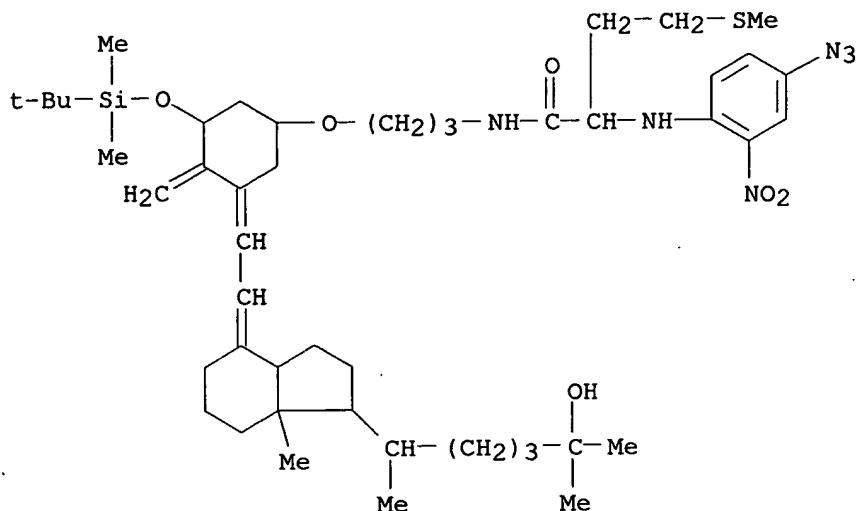
IT 120983-74-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and desilylation of)

RN 120983-74-6 CAPLUS

CN Butanamide, 2-[(4-azido-2-nitrophenyl)amino]-N-[3-
[(1 α ,3 β ,5 Z ,7 E)-1-[(1,1-dimethylethyl)dimethylsilyl]oxy]-25-
hydroxy-9,10-secocholesta-5,7,10(19)-trien-3-yl]oxy]propyl]-4-(methylthio)-
, (S)- (9CI) (CA INDEX NAME)

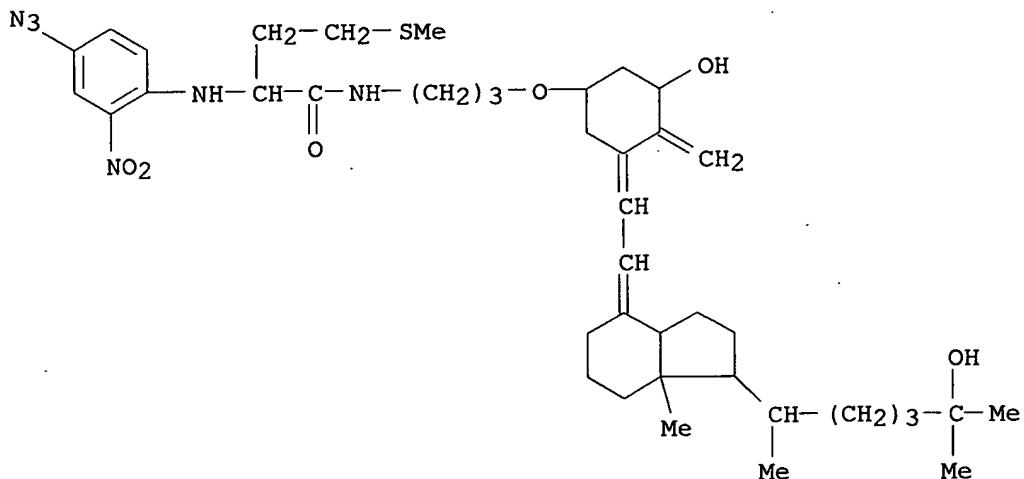


IT 120983-75-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as second generation photoaffinity analog of
dihydroxyvitamin D3)

RN 120983-75-7 CAPLUS

CN Butanamide, 2-[(4-azido-2-nitrophenyl)amino]-N-[3-
[(1 α ,3 β ,5 Z ,7 E)-1,25-dihydroxy-9,10-secocholesta-5,7,10(19)-
trien-3-yl]oxy]propyl]-4-(methylthio)-, (S)- (9CI) (CA INDEX NAME)



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COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE

ENTRY

98.89

TOTAL

SESSION

271.20

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY	SESSION
	-11.70	-11.70

STN INTERNATIONAL LOGOFF AT 09:28:43 ON 29 MAR 2007